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MEDICINE IN BOSTON

THE history of medicine in Boston and its vicinity covers a period of slightly over three hundred years, for with the landing of the Pilgrims in 1620, Deacon Doctor Samuel Fuller, a physician of considerable ability and one of the passengers on the *Mayflower,* brought to this country more than a smattering of medical knowledge. It was he who looked out for the early settlers and his wife served as a midwife in the Massachusetts Bay Colony. There were, however, few physicians who practised medicine in Boston during the Colonial period.[1] Most of the practice was carried on by the governors of the colonies, particularly the elder John Winthrop in Massachusetts and his son in Connecticut. Some of the medical letters written by John Winthrop the younger will be found in the Boston Medical Library, as well as the medical receipt-book used by his father. Next to the governors the ministers were the leading practitioners of medicine as well as the educators of the people. Outstanding in this respect were Cotton Mather and Thomas Thacher. Thacher wrote the first medical document printed in this country,[2] a broadside with instructions taken from Sydenham for the treatment of smallpox. Some of the early presidents of Harvard College were also practitioners, who later sent their sons abroad to gain more thorough medical education. Twenty-six of the early Harvard graduates practised medicine in New England before 1700, but only two are known to have had the M.D. degree. The diseases which were prevalent in the seventeenth century in the colonies were largely epidemics of fevers, with severe attacks of smallpox. Although plague was rife in London during the middle of the seventeenth century, for some reason no case reached America. Active quarantine was established in Boston Harbor and may have been one of the reasons why plague was not implanted in the Colony.

In general, during the seventeenth century, there was little advancement in medicine and, as is so frequent in a pioneer people, the care of the sick was largely in the hands of their leaders, either the governors, the ministers, or the educators. There was, moreover, no attempt at the

establishment of a hospital or medical school and nothing but backwoods surgery was undertaken. The people, however, were in general a hardy stock and medical care was not a very serious matter until epidemics of smallpox came to menace the whole Colony.

THE EIGHTEENTH CENTURY

Turning to the eighteenth century, we find the establishment of the first hospital on Spectacle Island in Boston Harbor. This was for quarantine purposes and came as the response, in 1716, to a protest against the amount of smallpox and yellow fever which was menacing Boston. Prior to that time there had been some isolation of patients in houses as early as 1701. The method of quarantine, however, did not prevent the spread of smallpox and in 1721 there occurred a great epidemic, sweeping away a large percentage of the population. It was during this epidemic that the first great physician of Boston appeared, Zabdiel Boylston,[3] who began his direct inoculations for smallpox, after being urged for some time to do so by Cotton Mather. He was eminently successful and the practice of inoculation was continued until the discovery of vaccination by Jenner in 1799, also first done in this country by a Boston physician.

Between Boylston's time (1721) and that of Benjamin Waterhouse, who did the first vaccination in 1800, there were a number of interesting events occurring in Boston. One of the most brilliant physicians of the time was William Douglass, who made many striking innovations in medicine. He organized the first medical society in 1735 and observed an epidemic of scarlet fever, reporting nearly 4,000 cases in an excellent book published in 1736. This accurate clinical observation reveals Douglass as an unusually acute observer. He also had other scientific interests outside of medicine; he corresponded with some of his friends in regard to eclipses and earthquakes; travelled about the four colonies of Massachusetts Bay and commenced a map of New England; he was also something of a botanist and wrote a two-volume work on the history of the *British Settlements in North America* (1749-1751). A second physician was Silvester Gardiner, who, trained in London by William Cheselden and having studied in Paris, returned to Boston in 1735, where he developed an extensive practice, became a member of Douglass' "Medical Society in Boston," established the first apothecary shop in the town in 1744, built a large house and entertained lavishly, and was considered one of the important personalities of the time. As a surgeon, he operated as early as 1741 for stone in the bladder. A final figure before the Revolution was James Lloyd, who, like Gardiner, had studied in England

under Cheselden. He as well, however, had acted as a dresser at Guy's Hospital, attending lectures on midwifery by William Smellie and also those of William and John Hunter. Lloyd developed a close friendship with John Hunter, a man of exactly his age. Returning to Boston in 1752, Lloyd was the first physician to practise midwifery in this country upon a scientific basis.[4] Like other leading physicians of the time, he was a man of outstanding worth to the community and a favorite of the English governors. He was one of the first to take pupils as apprentices and among them was Joseph Warren, later killed at Bunker Hill, whose influence was to extend through the Warren family for five generations, up to the present day.[5] Lloyd had other students and we know at least four of them who were graduates of Harvard College.

With the Revolution much that seemed to be a fixture in Boston medicine was eliminated and the older physicians like Lloyd and Gardiner tended to disappear and to be replaced by the younger men, who had taken an active part in the War of Independence. They saw the importance of establishing hospitals and medical schools and of not depending upon the apprenticeship method of medical education or the care of patients in private homes or poorhouses.

Certain of the older doctors, such as Lloyd, were too old for active service or took the side of the loyalists and retired to Halifax, as was the case with Gardiner. Most of Lloyd's pupils fought on the side of the patriots. They were inspired by the death of Joseph Warren at Bunker Hill and by the leadership of his brother, John Warren, who even before the war had begun to teach students and to give systematic courses in anatomy and surgery. The service rendered to the troops was scandalously crude and few physicians from Massachusetts, with the exception of John Warren, did more than ordinary field or hospital duty. Twenty-two, however, saw some service with the Massachusetts Provincial Congress in 1774-1775. Only two of Lloyd's pupils remained as loyalists, the more distinguished being John Jeffries, a graduate of Harvard College in 1763 and one of the few New England physicians of the time who had received a medical degree in Europe (Marischal College, Aberdeen, 1770). Although a close friend of Joseph Warren, they took entirely different paths in 1775. Jeffries went to Halifax, where Howe made him surgeon-general to the forces. He later lived in England and was the first person to cross the sea by air, making his flight in a balloon over the English Channel from Dover to France (1785).

The war ceased in October 1781, with the surrender of Yorktown, but some time before this a good many of the Boston physicians had re-

turned to their homes and were organizing their practices. The war changed the medical profession in Boston in three distinct ways: the old preacher-physician of the Cotton Mather type disappeared, systematic medical education began, and the physicians organized themselves into societies. During the Revolutionary times the only name of great importance to medicine in Massachusetts was that of John Warren. It was this same Warren who, in large part, instigated the Massachusetts Medical Society and established the medical department of Harvard College.

The Massachusetts Medical Society,[6] founded in 1781, is the oldest medical society in the United States with a record of uninterrupted meetings from its foundation to the present time. It had its real beginnings in the "Medical Society in Boston," begun by William Douglass in 1736, which lasted only a few years. In 1765 Cotton Tufts of Weymouth, Massachusetts, attempted to form another medical society, but this, too, was a failure. It took the influence of John Warren, in 1781, to establish the Massachusetts Medical Society. At the same time other societies were formed in Boston, particularly the American Academy of Arts and Sciences, incorporated in 1780, with many physicians as members. The Massachusetts Humane Society was also organized in 1780 and held its first meetings at John Warren's house.

One of the earliest functions of the Massachusetts Medical Society was to establish a library. This was done in 1782 and the library existed for ninety years, until 1872, when most of the books were given to the Boston Public Library. These same books were later transferred to the Boston Medical Library,[7] where they now are to be found. Boston doctors began giving their books to the Library from the start of its existence and as early as 1787 James Lloyd presented a number of volumes. It became the natural thing for doctors to contribute their books and many of the finer books in the Boston Medical Library at the present time were so acquired.

It was about this time, moreover, that the Harvard Medical School[8] was organized. This occurred in 1780, although not actually founded by the Corporation of Harvard College until 1782. John Warren, who was behind this movement, as he was behind almost everything else in medicine in those days, accepted the chair of Anatomy and Surgery. Benjamin Waterhouse, trained in England, took the chair of the Theory and Practice of Physic, and Aaron Dexter, the first librarian of the Massachusetts Medical Society, became the Professor of Chemistry and Materia Medica. These gentlemen were inducted into office in 1783 and began teaching at Cambridge shortly after that time, the first building occupied being Holden Chapel, which may still be seen in the yard of Harvard

College. There were many difficulties, however, in carrying on the courses in Cambridge. Waterhouse felt that he could lecture on medicine perfectly well without the aid of patients and he was also interested in natural history, mineralogy and botany. John Warren, the surgeon, however, needed clinical material and finally had to use the Boston Almshouse, where about fifty patients were cared for. Warren occasionally used the Marine Hospital in Charlestown, after it was established in 1803. These two hospitals, with the Boston Dispensary,[9] incorporated in 1801, and a few beds at the State Prison in Charlestown, erected in 1805, were the only clinical facilities open to the medical students of the time.

The animosities which arose during the war quickly disapppeared in the medical profession, much as they did after the Great War. Lloyd and Jeffries, both marked loyalists, were taken back into the medical fold and Lloyd became one of the leading supporters of the Massachusetts Medical Society. As soon as this society was well established, it seemed desirable to publish transactions and the first volume of *Medical Communications of the Massachusetts Medical Society* was printed in Boston and appeared in 1808. Part I of this volume, however, had been printed in 1790, so that there was a period of eighteen years after the first *Communications* before the volume was complete.

THE EARLY NINETEENTH CENTURY

With the opening of the century came the outstanding work of Benjamin Waterhouse on cowpox vaccination. Jenner's discovery, first published in 1799, soon reached the active Waterhouse, who decided to try it upon his own family after publishing a note on it in the newspapers and exhibiting Jenner's book at the meeting of the American Academy of Arts and Sciences held in Cambridge under the presidency of John Adams. Without hesitation, he took some of the vaccine which had been sent him from England and vaccinated his five-year-old son, July 8, 1800. Almost at once there arose a controversy in regard to the value of vaccination not dissimilar to the uproar caused by Zabdiel Boylston's inoculation experiments in 1721. Waterhouse's pamphlet, excellently written, appeared in 1800, with a continuation in 1802. By that time a committee from the Boston Board of Health had made a thorough survey and were convinced that cowpox offered complete security against smallpox. Waterhouse, one of the least liked physicians of his time, became the outstanding physician of his period, when considered from the historical point of view, and he may rightfully be called "the Jenner of America."

It was shortly after the work of Waterhouse that books of medical interest began to be published in Boston. The *Medical Communications*

were carried on by the Massachusetts Medical Society. The annual addresses before the Society were usually published and in 1808 the Society sponsored a *Pharmacopoeia,* prepared by James Jackson and John Collins Warren. Jackson was an active physician in Boston, while John Collins Warren, the son of John Warren, was the leading surgeon. Between them they were responsible not only for the *Pharmacopoeia* but also for the *New England Journal of Medicine and Surgery,* established in 1812 and later changed to the *Boston Medical and Surgical Journal* in 1828. In 1810 James Thacher, a brilliant physician from Plymouth, Massachusetts, noted for his *Journal* written during the War of the Revolution, published the *American New Dispensary,* one of the first books of its type issued in this country.

The Massachusetts General Hospital[10] was urged by Warren and Jackson as early as 1810. Funds had been accumulating for a number of years, principally money left by Thomas Boylston and William Phillips. In 1817 a site was chosen for the hospital on North Allen Street and Charles Bulfinch, distinguished architect of the State House at Boston, drew the plans. The cornerstone was laid in 1818 and the first patient admitted in 1821. James Jackson was chosen physician-in-chief and John Collins Warren, surgeon-in-chief.

Even before the Massachusetts General Hospital was established, it seemed best to move the Harvard Medical School from Cambridge to Boston, and this was done in 1810. The first definite building, however, for the School was not established until 1816, when a fine structure was built on Mason Street. The early years of the Harvard Medical School were ones of great uncertainty. There was much friction in the faculty, but as the School grew and its affiliation with the Massachusetts General Hospital became more marked, the need for a building near that institution was obvious. In 1847, therefore, a building was built on North Grove Street, on land given by George Parkman, who was later murdered by John W. Webster in his laboratory, an event which led to one of the outstanding criminal trials in this country. This building was sufficient from 1847 to 1883, when a new building became necessary, which was expected to be the home of medicine in Boston for generations. This was built on the corner of Boylston and Exeter Streets, now in back of the Boston Public Library and occupied at present by Boston University. By 1907 the School had outgrown this building and moved to its present extensive development on Longwood Avenue, where it became the hub of a great medical center. Thus the School, first established in Cambridge, moved close to the Massachusetts General Hospital, where it remained for three generations. Later, as medicine grew in

Boston, with implants in various parts of the city, the School no longer needed to be adjacent to the old hospital and finally found a place for itself at some distance.

The Massachusetts General Hospital still retains the original building designed by Bulfinch. In its dome, October 16, 1846, W. T. G. Morton administered ether to a patient later operated upon by John Collins Warren. This was, perhaps, the outstanding contribution to medicine from this country, and from the Ether Dome, as it is now called, knowledge of the anesthetic properties of this drug spread throughout the world. It was not by any means the first time that ether had been successfully used for a surgical operation, but it was the first public demonstration upon a human being, and by his skill Morton convinced the world of the value of surgical anesthesia. Since 1846 there has been a marked development of the Massachusetts General Hospital and the original Bulfinch building is now nearly surrounded by towering structures necessary for the practice of modern medicine. As a building has been erected every twenty or thirty years since 1820, the hospital offers in a remarkable way a history of the development of hospital construction in this country and of architecture in general. The latest addition will be the new surgical building now in the process of being erected.

Besides the development of the Harvard Medical School and the Massachusetts General Hospital, two other trends are noted in Boston in medicine. The best students usually went abroad to study and many of them, during the period from 1820 to 1850, turned aside from the old English medicine to study in France. Going along with European education we see the last of the apprentice system, for the School, now well established, took care of all the young men seeking medicine as a vocation. The French influence was largely the result of the dominance of the Paris clinician, Louis. The first Boston students were drawn to him about 1732 and at the same time men went over from Philadelphia. Of the eight young men who went from Boston during that period, at least five became outstanding physicians of their time: Henry I. Bowditch, J. Mason Warren, James Jackson, Jr., George C. Shattuck and Oliver Wendell Holmes. The Philadelphia group were led by W. W. Gerhard and Casper W. Pennoch, William Pepper and Alfred Stillé. It was Louis' influence, that these men brought back to this country, which served to revolutionize both the teaching and the practice of medicine.

MODERN DEVELOPMENTS

There was little of interest happening in Boston in medicine from 1850 until the time of the Civil War. Oliver Wendell Holmes, John C.

Warren and others took an active part in the founding of the American Medical Association in 1846. From 1861 until 1865 a great many physicians from Massachusetts participated actively in the war, but none of them very conspicuously. Zabdiel Boylston Adams, a graduate of the Harvard Medical School in 1853, served throughout the war. He was wounded four times and experienced the horrors of Lynchburg and Libby prisons. Few physicians saw such extensive service as Adams and none carried himself with greater fortitude. Another prominent physician was Samuel A. Green, a graduate of the Harvard Medical School in 1854. John Homans served in both the navy and the army and at one time was acting medical director of the Army of the Shenandoah.

The next influence in Boston medicine came from Germany. As many students from Boston had gone to France between 1820 and 1850, so they began to go Germany after 1870, particularly to the laboratories of famous teachers such as Karl Ludwig, who trained Henry P. Bowditch. Bowditch, in turn, developed the first physiological laboratory in the United States. Surgery, in the period of the eighties, was largely dominated by the striking personality of Henry Jacob Bigelow, who added to our knowledge of the mechanisms of the hip and the evacuation of vesical calculi. Reginald Heber Fitz takes a high place in the annals of American medicine. He was a pathologist, widely trained in Europe, and gave in 1886, for the first time, a clear picture of appendicitis and advocated radical operation. His conclusions were based on the study of many hundreds of cases at the Massachusetts General Hospital. He later described another acute abdominal disease, pancreatitis. More recently Harvey Cushing added greatly to our knowledge of intracranial disease through his work in cerebral surgery at the Peter Bent Brigham Hospital, after its founding in 1913.

Medical education in Boston was greatly reformed by Charles W. Eliot, the president of Harvard University in 1870. He clearly saw the defects then present in the education of doctors, increased the length of the course, took the privilege of collecting private fees from the physicians and made entrance examinations more rigid. This resulted in an increased number of students and a new building was erected in 1883, only to be outmoded in 1907, when it was replaced by the present elaborate structure. In the meantime, Tufts College had established a Medical School in 1893[11] and Boston University in 1873. As in all other localities, there have been marked strides in medical development in Boston since 1900, with new hospitals and large schools, special infirma-

ries and the development of specialties in the medical schools. This is all too familiar to need recounting at the present time. The last great advance in Boston and perhaps one of the most important contributions was that made by Dr. George R. Minot and William P. Murphy in relation to special diet for patients with pernicious anemia, with attention directed to liver as the essential feature of this diet. This work was first published in 1926 and soon led to the development of a specific extract from liver, now widely used in the treatment of this disease.

Modern Boston is served by six large general hospitals: the Massachusetts General Hospital, the Boston City Hospital,[12] the Peter Bent Brigham Hospital, the Beth Israel Hospital, the Carney Hospital, and the Massachusetts Memorial Hospitals. Other hospitals include: the old Boston Dispensary, the New England Deaconess Hospital, the Boston Lying-in Hospital, the Children's Hospital, the Robert Breck Brigham Hospital, the New England Baptist Hospital, the Faulkner Hospital, the Psychopathic Hospital,[13] the Forsyth Dental Infirmary for Children,[14] the Collis P. Huntington Memorial Hospital, the House of the Good Samaritan, the Infants' Hospital and the Massachusetts Eye and Ear Infirmary.

The three important medical schools, Harvard, Tufts and Boston University, use the larger hospitals for teaching. Dental instruction is given at the Harvard Dental School[15] and the Tufts Dental School. In general, centers for research and teaching have developed in all the important hospitals and attention may be particularly called to the laboratories for diseases of the blood, neurology and pathology at the Boston City Hospital, endocrinology and radiology at the Massachusetts General Hospital, nephritis and surgery at the Peter Bent Brigham Hospital, diabetes at the New England Deaconess Hospital, neurosyphilis at the Boston Psychopathic Hospital, cancer at the Huntington Memorial Hospital, rheumatic heart disease at the Good Samaritan, dentistry at the Harvard Dental School, and obstetrics at the Boston Lying-in Hospital. Other centers, such as the Eye and Ear Infirmary, the Boston Dispensary, the Robert Breck Brigham Hospital and the Children's Hospital, also are constantly advancing in knowledge of medicine.

Libraries to serve this vast group of research workers, as well as the general physicians of Boston and even all of New England, have come as a natural part of the growth of medicine. Oldest and largest is the Boston Medical Library. In recent years the Treadwell Library at the Massachusetts General Hospital has greatly augmented its facilities, closely followed by a very rapid growth in the library of the Harvard

Medical School. Newer centers are now well established at the Eye and Ear Infirmary in the Howe Library for ophthalmology, at the Boston City Hospital, the Psychopathic Hospital and the Massachusetts Memorial Hospitals.[16]

To the members of the Medical Library Association, medical Boston extends her greetings!

H. R. V.

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DUN'S LIBRARY IN THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND

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The history of the Library of the Royal College of Physicians of Ireland, Dun's Library, is so intimately bound up with that of the College that it is impossible adequately to consider the one without entering largely into the other. The College of Physicians, which dates its origin from 1654, was founded under the aegis of Henry Cromwell, Lord Deputy of Ireland and Chancellor of the University of Dublin, and it was, in reality, at first the Medical Faculty of Trinity College, Dublin. Trinity Hall, a building then in the possession of Trinity College, was set apart as a meeting place for the Physicians, and as a residence for their first President, John Stearne, who was a Senior Fellow of Trinity College, and afterwards Professor of Hebrew and Professor of Medicine there. Immediately after the Restoration in 1660, the College of Physicians was reconstituted in Trinity Hall, with Stearne as President, and on August 19, 1667, it was incorporated by Royal Charter of King Charles II. For more than thirty years after its foundation the College of Physicians was intimately associated with Trinity College, close to the front gate of which its home was situated, and of which all its Fellows were alumni. It did not need, and it probably did not have, any separate library of its own.

The political and religious troubles, which were associated with the contest for the English crown between James II and William III, were perhaps more really felt in Ireland than in England, and a religious dispute, which resulted from them, led to a rupture of the friendly relations which had existed between the two Colleges. It was a part of their original agreement that the nomination of their President by the Physicians should be ratified by the Board of Trinity College, and this for a time was done. In 1687, however, the Physicians nominated as their President one of their Fellows, John Crosby, but Trinity College refused to ratify the nomination "seeing that the person whom they had nominated was not a protestant of the Church of Ireland." Neither side would give way, and finally the association of the two bodies was ended, and Trinity Hall handed back to Trinity College. In 1692, when civil peace had been restored in their country, the Physicians, at the instigation of Patrick Dun, one of their Fellows, were granted a new Charter by Wil-

liam III, which incorporated them as the King and Queen's College of Physicians in Ireland, and Dun was nominated as their President.

Patrick Dun, the son of Charles Dun and grand nephew of Patrick Dun, the well-known Principal and Dean of the Medical Faculty of Marischall College, was born in Aberdeen in 1642; he had studied in the Marischall College and afterwards had gone abroad, but very scanty records have come down to us of his early life. In 1665 he was entered *in prima classe* at Marischall College, but there is not any record in the rolls there of his having been granted a degree, either in Arts or Medicine. We learn that he was in Paris before 1676, for Sir John Hill writing from Dublin Castle on February 14 of that year to John Forbes of Culloden, Inverness, says: "Here is one Dr. Dun, an Aberdeensman, . . who desires to have his service remembered to your son, Duncan, with whom he had acquaintance in Paris." In 1677 Dun was established in Dublin, on the staff of the Duke of Ormond, the Lord Lieutenant, who in that year wrote to his Vice-Chancellor in the University of Oxford requesting that "Dr. Dun who has very good testimonials from the Universities of Aberdeen in Scotland, Valentia in Dauphiny, and Trinity College, Dublin, also the Degree of Doctor in Physic" be admitted to the same degree in the University of Oxford. On March 13 1677/8 "a diploma of his incorporation was sealed and sent to him." About this time also, the exact date being uncertain, Dun was admitted a Fellow of the Irish College of Physicians, and in 1681 he was for the first time chosen President of the College. From that time till his death on March 24, 1713, Dun was one of the leading physicians in Ireland. On December 11, 1694 Dun married Mary, daughter of Col. John Jephson, but their only child, a son, Boyle, who was born in 1697, died in October 1700. In 1696 Dun was knighted by the Lords Justice.

While in Dublin, Dun had the lease of a house on the Inns Quay, where he lived, and where he had accumulated a number of "mathematical instruments and other curiosities," together with a considerable library of books, and at the time of his death he was in possession of a good deal of real property in the south of Ireland. All his property, real and personal, he bequeathed to Lady Dun for her life, and after her death in trust to the College of Physicians, for the purpose of establishing a complete School of Physic in Ireland, and for paying the salary of a professor or professors, who were to be appointed in accordance with a deed which he had executed, and who were to lecture in the School. His books he specifically designed for the College of Physicians, and he wished

that, if possible, after Lady Dun's death his house should become the home of the professor appointed under his will, and that a room in that house should be reserved for his books, and as a meeting place for the College of Physicians. About his books he was most particular as is shown by the following extract from his will:

"Likewise I would give my books for the lawful use of the sd Professors and College of Physitians, provided the sd Professor or Professors inhabiting the sd house immediately after their election and before they have possession given them of the house by the Guardians, give bond and security to keep and preserve the sd Library and all and every book and books in it, and if any should be lost or wanting, to pay for or purchase another of the same kind, the same paper and edition or better in the room thereof."

In accordance with this provision of Sir Patrick's will there came into being Dun's Library of the College of Physicians, although for many years it was to have a very chequered career, from which it was eventually to emerge a mere skeleton of its former self.

According to the will the College of Physicians was not to come into possession of any of Sir Patrick's property till after the death of Lady Dun, and this did not take place till 1748. Immediately following Sir Patrick's death, however, Lady Dun and the College were on the most friendly terms, and for several years the College met at her house on the Inns, in the room in which Sir Patrick's books were kept. Disputes, however, arose, and Lady Dun appears to have given up all intention of accommodating the College in her house, but she decided to hand over the books at once to the care of the President of the College. On January 16, 1726/7, the President and Fellows agreed that the books, "together with the catalogue," be given into the care of Dr. Cope, one of the Fellows of the College, and that they be "lodged with him." The College at the time had no home of its own, and for many years to come it met in the house of its President. The removal of the books from their old home, where Sir Patrick had known and studied them, must have seemed to many to be a sad break with tradition, but in reality it was a blessing, for on September 1, 1728, the house on the Inns was destroyed by fire, and much of the contents which was not burnt was looted by the mob. Dun's library had fortunately escaped this disaster.

The College of Physicians had secured Dun's library, but it was very important that they should establish their claim to the reversion of his real property, as well as to the remainder of his personal property. To effect this, in 1741, an Act was passed by the Irish Parliament, (15 Geo. II.) which established a professor on Dun's foundation, and which, dealing with the books, enacted that the College "shall with all

convenient speed — deposit and place the same in some convenient place in or near the said City of Dublin for the use of the said College of Physicians." The convenient place chosen by the College was, at the time, the house of Dr. Henry Cope, and when in January 1743, Cope died, the books were put in the care of the President of the College, Dr. William Stephens. On February 25 of that year the President and Fellows ordered "that Dr. Anderson do compare the catalogue of books now in the possession of the President with the books in his possession likewise, and make a report thereon to the College." Of this report, if ever made, there is no record.

On January 22, 1756, the Irish House of Lords appointed a committee "to enquire what good purposes have been answered in pursuance of an Act passed in the fifteenth year of his present Majesty's reign." A week later Anthony Relhan, then President of the College, in evidence before the Committee, stated that the remains of the books in Dun's library, numbering about three hundred volumes, were in the possession of Dr. Quin, as the College had no other place for them; further, that there were two catalogues of the library, one with the Professor, and the other, he believed, "in a chest of lumbar with the old books." There had not, he said, been any security given or asked "for the forthcoming of the books." In spite of this evidence of carelessness no improvement seems to have been made for upwards of thirty years; the books remained with Dr. Quin, and the catalogue in the "chest of lumbar." Neither of the two copies of the catalogue is now to be found.

In 1785 another Act of Parliament (25 Geo. III. c. 42.) was passed, which dealt with Dun's estate. By this Act it was directed that certain of the surplus profit from the estate was to be spent on the purchase of medical books for the library, and as the profit was likely to be considerable the future looked hopeful. On January 29, 1787, the College appointed a small committee to consider "the best means of establishing a medical library," and on August 4, it was decided "that one of the King's Professors shall take upon him the office of Librarian to Sir Patrick Dun's Library and shall give bond of security in the manner specified by Sir Patrick Dun." On September 19, 1787, Stephen Dickson, King's Professor of the Institutes of Medicine, was appointed Librarian, and was given authority "to fix up a library." In consequence of this order the books were taken from Dr. Quin's house, and placed in the lecture room in Trinity College, where they were to be housed till 1814, when they were transferred to a room in the newly built Sir Patrick Dun's Hospital.

At last Dun's Library seemed to be established satisfactorily, and

with a fair prospect of success. It had a home of its own, even if that home was somewhat inadequate, it had a Librarian to take care of it, there was a considerable fund to provide for its development, and admirable rules for its administration were approved by the College. It was ordered that all the books which were added by purchase were to be treated in a similar manner to the books in the original library; books might be loaned to Fellows of the College, or to matriculated students of the School, provided a deposit of money was made which was "at least equivalent to the value of the books lent or to the set to which that book may belong." The Librarian was to attend, twice a week in the winter and once a week in the summer, for the purpose of lending books, and he might appoint a time at which students might read those books or manuscripts which it was not advisable to lend. A catalogue was to be kept, and reports were to be made to the College from time to time as to the books which should be bought for the Library. Sir Patrick Dun's name was to be stamped on the cover of all the books.

At first things went very well, a considerable number of new books were bought, and on June 16, 1794, the President was asked "to appoint a proper person to print fifty copies of the catalogue for the use of the College." Later £ 7. 4. 3 was paid for the printing of the catalogue. One copy of this catalogue has survived. It is an octavo pamphlet of thirty-six leaves. On the first recto, the verso of which is blank, is the title as follows: "A/ Catalogue / of the / Books/ of /Sir Patrick Dun's / Library. / Dublin./ 1794./" "On the second recto, the verso of which is also blank, is the following "Advertisement": "The Books are classed and numbered in the Catalogue in the order in which they stand in the Library. The mark * prefixed to a number denotes that more than one volume is comprised under it, the sett increasing by periodical publication." The list of books begins on the third recto. The books are listed in four classes, under subjects as follows:

A. Anatomy, Surgery, and the Institutes of Medicine. (360)
B. Chemistry, Materia Medica, Botany and Natural History. (387)
C. History and Practice of Physic. (324).
D. Miscellaneous. (98).

In each class the books are numbered according to their size, thus: A. Folio. 1-16; A. 4to .1-128; A. 8vo. 1-163; A. 12mo. 1-53, and so for the other classes B. C. and D. In all there are 1169 books listed. This is the earliest catalogue of the Library which has been preserved. It lists the titles of one hundred and fifteen books printed before 1713, when Dun

died, and which consequently might have been in his library, of these forty-seven only are to be found in the present catalogue. Definite evidence of any one of these books having belonged to Sir Patrick has not been found; some of them have been presented since his death, but some may have been his. It is sad to think that of the three hundred books which were in Quin's care in 1756, not one can now be identified with certainty.

For a time Dickson was active in the discharge of his duties as Librarian, and there are records in the College Minute Books of grants, amounting to £ 828. 10. 11, made to him for the library during the first eight years of his appointment, and this does not, by any means, represent all the money paid for books during the period. Later on, however, he was not satisfactory; he relinquished his office of Librarian on May 13, 1797, and shortly after he left the College. In 1799 his name was removed from the list of Fellows on account of his absence without leave from the College for two years. Professor John William Boyton succeeded Dickson as Librarian, and shortly afterwards the administration of Dun's estate was again the subject of enquiry by a committee of the Irish House of Lords. Much of the evidence given at that enquiry, as well as some of the statements in the report subsequently made by their Lordships, are now known to be false, but there can be no doubt that considerable laxity in the care of the Library was disclosed. In a manuscript catalogue of the Library dated 1800, some of the books are noted as "lost by Dr. Dickson," and bills for books were presented to the College for the delivery of which neither the bookseller nor the Librarian could vouch. In 1800, just before the Irish Parliament sold its own birthright, an Act was passed, called the School of Physic Act (40 Geo. III. c. 84), which took from the College all power of spending money from Dun's estate for the purchase of books for the Library. By this Act the surplus funds of the estate, after the payment of certain fixed charges, was handed over, together with some of the capital, to be spent on the building and the maintenance of a hospital where clinical teaching in medicine could be given. The mismanagement of the Library, although one, was not by any means the only or the most important reason for the passing of this Act.

Section 12 of the School of Physic Act, referring to the management of the Library enacted:

"That it shall and may be lawful to and for the said President and Fellows, annually, on the 18th of October, to elect a Librarian, who shall under the direction and control of the said President and Fellows, superintent the purchase of books to form a medical library, whenever there shall be a fund for purchasing to same,

and shall have the care of them, and of all such books as have hitherto been purchased, and the management of the library, and that such librarian shall, before he enters upon his office, give security by bond to the said President and Fellows for the due care and preservation of the books committed to his care. And that the said librarian shall receive an annual salary not exceeding £70, provided he shall furnish the necessary fuel for such library and medical lecture room, and shall faithfully discharge such duties as shall be prescribed to him by the President and Fellows of the College of Physicians."

It was further enacted that the books were to be kept in the lecture room in Trinity College till the new hospital was built, when they were to be transferred to it. As the result of this Act the outlook of the Library was gloomy indeed.

Boyton was re-elected annually as Librarian till 1808, when he was moving the books from Trinity College to the new hospital. The work seems to have exhausted his energies, and on St. Luke's Day 1815 he was succeeded by Dr. Peter Edward McLoghlin, who died in office, April 9, 1819, and was superseded by Dr. Francis Hopkins.

McLoghlin evidently won the gratitude of his colleagues, for after his death they gave, from the private funds of the College, one hundred guineas to his widow and children. Shortly after Hopkins was appointed Librarian, on May 7, 1819, it was decided that the Library should be open on Tuesday, Thursday and Saturday of each week, from twelve to one o'clock, during the medical session, from November 1, to May 1, and on Tuesdays and Saturdays at the same hour for the remainder of the year. The task imposed on the Librarian was no light one, considering the salary attached to the office, but Hopkins took his duties seriously. On August 25, 1819 he submitted to the College a specimen of a catalogue which he proposed to have printed, and he also recorded a list of valuable books presented to the Library by Dr. Edward Hill. A week later he himself gave a number of books, some of which, with his book-plate, are now in the Library. His tenure of office was, however, to be short, and on November 1, 1819, it was reported to the College that he was ill. Dr. Orpen was asked to discharge his duties during his illness, but in a few days Hopkins was dead, and on November 22, Dr. Edward Hill was appointed Librarian in his place. Hill was a remarkable man. He was born in 1741, and graduated in Arts in the University of Dublin in 1765. Ten years later he was elected a Fellow of the College of Physicians, of which he was six times President. He was an excellent classical scholar, wrote a beautiful hand, and in 1820, when he was in his eightieth year, he wrote a copy of the Library catalogue in two quarto volumes. These volumes, which contain respectively one hundred and forty-four and one

hundred and fifty-six leaves, are written in a beautiful copperplate hand, and give the titles of the books arranged alphabetically according to author, the date and place of publication of each book, together with its shelf number in the Library. The books had not been catalogued since they had been placed in the Hospital, and as new shelf numbers had to be assigned to them, the work undertaken by Hill was very considerable. The College voted him twenty guineas for his trouble, which Hill indignantly refused, but he was mollified when it was pointed out to him that the money was "intended not as a remuneration but as a tribute of respect." Hill was not an easy person to deal with; complaints of his autocratic conduct as Librarian were made more than once, and when in 1824 the books were transferred from one room to another in the Hospital, the duty of supervising the change was given, not to the Librarian, but to two other Fellows. This may have been in consideration of Hill's advanced age, then 84 years; one hopes that it was not due to any disrespect to an aged officer. Two years later Hill resigned and on October 1826, Thomas Herbert Orpen was elected Librarian. In 1828 Orpen published the second printed catalogue of the Library, with an arrangement similar to Hill's manuscript catalogue, but without the shelf numbers of the books. Its title runs as follows: *Catalogus Librorum Bibliothecae Patricii Dun, Equitis, Institutate A.D. 1711. Thomas Herbert Orpen, M.D. Bibliothecarius. Dublinii: Sumptibus Bentham et Hardy. MDCCCXXVIII.* At the top of the title-page is a wood-cut of the new Hospital. The volume consists of seventy pages and contains a list of 1419 books. Two hundred and thirty books had been added to the Library in thirty-four years, but in 1833 an appendix to the catalogue was printed which contained three hundred and twenty-five additional entries. Many of these additional books are marked with * to show that they had "belonged to the late Medical Society in Trinity College." The Library is described as founded in 1711, which was the date of Sir Patrick's will, but as it did not come into the possession of the College till his after death in May 1713, that date can hardly be considered as correct.

Orpen continued as Librarian till St. Luke's Day 1833, when he was succeeded by Samuel Litton, who, in turn, in 1840, was succeeded by John O'Brien, who remained in office till his death in December 1845. On January 5, 1846, George Alexander Kennedy was appointed Librarian and held office till his death on March 24, 1865.

On Monday July 7, 1862, the foundation stone was laid of the present College buildings in Kildare Street, and on July 5, 1864, the College met in these buildings for the first time. At last, after over two

hundred years, the College had got a home of its own. In the summer of 1865 the books were removed from the Hospital to the new building, to a room which, although not well designed as a library, is still their home. During all this period the Library had been purely a lending library, and in the Rules printed in the supplement to Orpen's catalogue it is stated: "The Library is open on every Tuesday and Friday, from Two until half-past Three o'clock precisely." The new College buildings, however, afforded facilities for reading in the Library, and it was decided to open a reading-room. Hitherto a Fellow of the College had always been elected Librarian, although since the passing of the School of Physic Act in 1800, the Fellow so elected had to resign his Fellowship, in view of his receiving from Dun's estate the princely salary of £ 70 a year, "provided he shall furnish the necessary fuel for such Library." Even a Fellow of the College of Physicians could hardly be expected to superintend the reading-room for such a salary, and in October 1865, when it was agreed that the Library should be open each day from ten till six o'clock, Mr. H. J. Fennell was appointed Dun's Librarian, and Dr. T. W. Belcher, Honorary Librarian, with an honorarium of £ 10 a year. Since that time Dun's Librarian has always been a layman, but after 1869, when Dr. Belcher left Dublin to become a clergyman, no further appointment of Honorary Librarian has been made, the general superintendence of the Library being vested in the Library Committee, which is appointed annually from among the Fellows.

Since 1865 the Library has developed considerably. Unfortunately it is not rich in the old literature of our profession, and there are many and important blanks in the list of medical classics. Some effort has been made to get together a collection of medical works by Irish writers, but many such, even by Fellows of the College themselves, are not in the collection. The Library is rich in its collection of periodical publications, and with these it is perhaps better supplied than any other library in Dublin. During the whole of the last century it was, however, sadly crippled for want of funds. It has been enriched by some noble gifts, such as the Fleetwood and the Arthur Macan libraries of obstetrics, gifts from Dr. T. W. Grimshaw, Registrar General for Ireland, Professor James Little, Sir John Banks, and Sir John William Moore; books on diseases of the eye from the library of the late Mr. Arthur Benson, and on mental disease from Dr. Connolly Norman and Dr. J. Mills.

Looking back over the history of the Library for the past two and a quarter centuries one cannot but regret that more was not done to enrich and to preserve its treasures, but, perhaps, in a country where

so much that was precious has been destroyed, one should be thankful that things are no worse than they are. The want of a home of its own for so many years was a serious handicap to the College, and when at last that home had been got, want of funds made even the maintenance of the Library difficult. The present deficiencies of the Library are, no doubt, a serious reflection on the conduct of those who should have cared for it and have fostered its growth, yet its very existence today is a noble monument to the industry, to the generosity, and to the love of his College, which prompted the bequest of its honoured founder, Sir Patrick Dun.

PROBLEM OF ABSTRACT PUBLICATIONS IN MEDICAL AND ALLIED SCIENCES*

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It has been evident for some time that there has been no effort to coördinate the abstracting services in clinical medicine and the clinical specialties. In 1936, a committee of the Medical Library Association, under the chairmanship of Miss Eleanor Fair, while making a study of indexing current medical literature, came to the conclusion that present methods of publishing abstracts in clinical medicine were neither satisfactory nor comprehensive. In studies which I have made as Chairman of the Committee on Periodicals and Serial Publications of the Medical Library Association, and also in some independent studies of my own, carried out in 1935 and 1936,[1] I came to essentially the same conclusion as Miss Fair's Committee: At present, although a tremendous amount of money and time, as well as much sincere effort, often representing personal sacrifice on the part of editors and scientists, is being expended in the publication of abstracts of medical literature, the results fall far short of the reasonable goals that should be attained as to scope, cost, economic organization, promptness of issue, and elimination of duplication.

In clinical medicine there is no abstract journal which at present can be considered as comprehensive. We have the:

International Medical Digest (published by Prior)
International Surgical Digest (published by Prior)
Current Medical Digest (commercial)
Modern Medicine (commercial)
International Abstracts of Surgery

None of these includes the clinical sciences as a whole; in addition, there are many abstract journals, each covering only one specialty (see Table).

[1]Trans. of the Second International Congress of Libraries and Bibliography, May 20-30, 1935, Madrid, Spain.
Bull. Med. Lib. Assn., 25:100-108, 1936.

*Paper Given before Joint Meeting of the A. L. A. University and Reference Librarian's Round Table, College Librarians of the Middle West and the A. L. A. Periodical Sections, Chicago, Dec. 30, 1937.

ABSTRACT JOURNALS USED BY INVESTIGATORS IN THE MEDICAL SCIENCES

CLINICAL	1936† Price
Ber. u. d. ges. Gynäkologie u. Geburtsh.	$61.50
Current Medical Digest (Donated)	0.00
International Abstract of Surgery	5.00
(Included with Surg., Gyn. & Ob., cost of which was raised $5.00 when Int. Abstract was added, therefore, an estimated cost of $5.00 is given.)	
International Medical and Surgical Digests	20.00
(Both journals included in service charges for Tice's Med. and Lewis' Surg. of $35.00 per year, therefore, no accurate price can be given. As a reduction of $10.00 is made, if one Digest is dropped, $10.00 each is given as estimated cost.)	
Kongresszentralbl. f. d. ges. innere Medizin	102.51
Tropical Diseases Bulletin	5.23
*Zeitschrift f. Kreislaufforschung.	5.88
*Zentralbl. f. Allg. Path. u. Pathol. Anat.	16.28
*Zentralbl. f. Chirurgie.	13.21
Zentralbl. f. d. ges. Hygiene	61.50
Zentralbl. f. d. ges. Kinderheilkunde	20.50
Zentralbl. f. d. ges. Neur. u. Psychiatrie	102.51
Zentralbl. f. d. ges. Ophthalmologie	41.00
Zentralbl. f. d. ges. Radiologie	61.50
Zentralbl. f. d. ges. Tuberkuloseforsch.	41.44
*Zentralbl. f. Gynäkologie	13.21
Zentralbl. f. Hals-Nasen-u. Ohrenheilkunde	41.00
Zentralbl. f. Haut-u. Geschlechtskrankheiten	61.50
*Zentralbl. f. Innere Medizin	12.06
Zentralorgan f. d. ges. Chirurgie	102.51
Total	$788.34
ALLIED SCIENCES	
Anatomischer Bericht	$18.09
Ber. u. d. ges. Physiol. u. exper. Pharm. (Abt. B, Ber. ges. Biol.)	143.51
Ber. u. d. wissenschaftl. Biologie (Abt. A, Ber. ges. Biologie)	102.51
Biological Abstracts.	15.00
Bulletin of Hygiene	5.23
Chemical Abstracts.	12.00
Helminthological Abstracts	7.42
Nutrition Abstracts and Reviews	10.55
Physiological Abstracts	13.60
Review of Applied Entomology	3.73
Zentralblatt. f. Bakteriologie, Abt. I, Referate	36.18
Total	$367.82
Total Cost of Abstract Journals in Medical Sciences	$1,156.16

*One or two original articles in each number, all the rest are abstracts.
†The 25% discount was deducted from the prices for the German journals.

As has been pointed out in the *Bulletin of the Medical Library Association*, a study of the journals on the shelves of the New York Academy of Medicine Library showed 146 clinical journals which carried abstract sections. Apparently there is no attempt to avoid duplication. In doing bibliographic work, one finds many abstracts of a given article, while painstaking search fails to reveal any abstracts of other articles of merit. The abstracts are not indexed in the bibliographic indexes, and one must search each volume of each journal to be sure that the desired item is not overlooked.

In Germany, a single firm publishes eleven abstract journals in clinical medicine, at a total cost in 1936 of $677.00 per year to any library subscribing to all of them. This price includes the 25% discount, the list price for the same group being $902.67. This group of abstract journals falls into a class of subscription that only large and well-endowed libraries can afford. This is especially unfortunate because the value of an abstract journal is presumably greater in a small library, where large numbers of journals containing original material are not available, but the majority of the smaller libraries cannot afford to subscribe to enough of these abstract journals to get coverage of basic subjects, and a subscription to even one of them would be beyond the means of the average individual subscriber.

In non-clinical subjects which are of importance to every student and investigator in the medical sciences, such as anatomy, physiology, bacteriology and biochemistry, there is another group of abstract journals which also duplicate each other unnecessarily. (See table.)

The total cost of all journals listed on the appended table of abstract journals used by investigators in the medical sciences is the very considerable sum of $1,156.00. While a very few of these prices might be considered approximate, every attempt has been made to state them accurately, and the total can be considered essentially correct. Both "Biological Abstracts" and "Physiological Abstracts" have announced increases in subscription prices for 1938. There seems no likelihood that there will be any substantial decrease in the total during the coming year.

PRESENT DIFFICULTIES IN THE PUBLICATION OF ABSTRACTS

Expense. Using the present methods of publication, the production of an abstract journal seems to be an exceedingly expensive undertaking. Unless special funds are available to subsidize such an undertaking, and the journal is to depend on subscriptions for its maintenance, the subscription rates are so high that they become extremely limited in number,

and are beyond the financial reach of the very institutions and individuals who would derive the most benefit from them.

Promptness of issue. Because of the volume of scientific literature that is being published, and which seems to be increasing continually, it is a problem to achieve prompt publication of abstracts. The journals must be searched for articles, the work must be assigned to suitable abstractors who are familiar with the specific specialty and capable of translating those articles which appear in that specialty in foreign languages, with consequent delay in the final printing of the abstract.

Elimination of duplication. At present there seems no consistent effort to eliminate duplication of abstracts, nor does there seem to be any efficient method, under present conditions, whereby this could be conveniently achieved. Such a mechanism would be of equal value in ascertaining that all specialties are covered and articles of merit not inadvertently omitted. There is a great deal of economic loss in the repetition of abstracts of the same work in different journals; there is also an economic loss in the amount of time spent by scientists and bibliographers in searching the various abstract sources in order to cover any subject thoroughly.

POSSIBLE REMEDIES FOR EXISTING DIFFICULTIES

Centralized bureau. A rational, business-like approach to the problem would call for the establishment of an abstracting bureau which would be national, and perhaps international, in scope. This bureau might publish two major comprehensive abstract journals, one in the biological sciences, which would include the so-called pre-clinical sciences, and one in the clinical sciences, including all specialties. It would be desirable to issue these publications with two sets of page numbering, those for complete volume numbering, and those for sections, and that subscriptions be made available to individuals for complete volumes and for sections and combinations of sections. If this method were followed, the number of individual subscriptions might be greatly increased. The botanist or anthropologist could subscribe to those sections covering his specialty. The neurologist or otologist could subscribe to the clinical sections in these specialties, and could also subscribe to the anatomical and physiological sections covering these subjects so that he could keep in touch with the experimental work which might be of importance to his specialty. If it were found possible to make it international in scope, a French as well as English edition could be published. Library subscriptions, except in departmental libraries, would generally be only for whole volumes.

Author abstracts. Every effort should be made, in the interest of economy as well as faithful interpretation of the author's article, to establish as early as possible the custom of furnishing author abstracts. The editors of all journals could require the authors to furnish, with papers submitted for publication, abstracts not exceeding a specified number of words. This procedure would be part of the routine of publication, each abstract to be accompanied by a stamped envelope addressed to the abstracting bureau. This abstract would receive editorial supervision at the same time as the original article; would be held by the editors, who would assume the responsibility for adding the bibliographic data (name of journal, volume number and page), and forwarding the abstract to the central bureau. Both author and editor would be amply compensated for their slight additional expense and trouble by the speed and accuracy in the publication of the abstract.

The saving for the abstract bureau would be enormous, and in the case of foreign abstracts, they could be turned over to translators for literal translation, which can be done accurately by persons not requiring the background and specialized knowledge necessary in order to adequately abstract an article in a foreign language.

Overlapping subjects. It will be impossible to eliminate entirely the difficulty of certain references which would be of undoubted interest to more than one group of scientists. This difficulty might be alleviated by the publication of the abstract in full in but one journal or section, with cross references wherever needed under the proper subject sections, by means of the insertion of the proper bibliographic entry of author, title and source, followed by a symbol indicating where the abstract appears.

Possibilities of financing such a project. A committee of librarians and scientists representing the major sciences should be formed to work out a practical plan which could then be presented to the executive committees of all scientific and clinical associations, and to the various foundations, in order to find out to what extent they would be willing to give financial assistance to such an enterprise, say for a period of five years, with the understanding that as it became self-supporting such aid is to be withdrawn. Also it should be determined to what extent they would use their influence in obtaining the assistance of editors to require author abstracts and in influencing the various journals now publishing abstract sections to discontinue these sections and to apply savings obtained in this way to the financing of a central abstract bureau, or in lowering the cost of subscriptions to the journals now publishing such sections.

Another possibility would be to interest some commercial publishing concern in the venture, which firm would be willing to work with librarians and scientists in formulating a plan. The aid of all scientific societies, both domestic and foreign, and any available international agencies should, however, be immediately sought in relation to obtaining author abstracts through the editors of both foreign and domestic journals.

Preliminary coördinating survey. If the reorganization necessitated by the adoption of the suggestions outlined above proves impracticable at the present time, a second approach would be to make a survey of all existing abstracting services now publishing abstracts in the medical sciences, including the biological and clinical subjects, in order to determine the exact character and extent of wasteful and unnecessary overlapping and to determine also what subjects and periodicals are at present not being adequately covered. On the basis of such information, an international committee could formulate plans which might coördinate and improve the work of existing abstracting services. It might also be possible to define where additional services are needed and where certain existing services might be combined to economic advantage.

If such a survey and coördinating agency had the backing of the various learned societies, the American Library Association, the Medical Library Association, and the International Federation of Library Associations, the commercial publishers of abstracting services that have large vested interests in the present costly and unsatisfactory set-up of such services, might be willing to coöperate with this agency in a more rational program for improvement.

In 1937, Miss Fair's Committee reported to the Medical Library Association that in response to a reprint of the notice which appeared in the *Bulletin of the Medical Library Association** entitled: "Wanted: A Clinical Abstract Journal," sixty-nine replies were received from various associations. Twenty-three stated that the associations had not met, and no definite reply could be given. Twenty-four letters evidenced interest, thirteen definite approval; eight definite disapproval. Interested and neutral comments raised questions of cost and desirability of making sure duplication of abstracts would cease. I have quoted from Miss Fair's published report.†

It seems quite evident that nothing definite in response can be expected from societies or foundations until some practical plan can be

*v. 25, No. 1-2, p. 146, Sept., 1936.
†Bull. Med. Lib. Assn., v. 26, No. 1-2, p. 43, Oct., 1937.

presented to them and until there is a reasonable guarantee that some of the existing evils are to be overcome.

The problem is quite a complicated one, and will require a great deal of thoughtful study and coöperation among members of different groups in order to arrive at some conclusion which would be comparatively satisfactory and not prohibitive in cost to the subscribers.

NEWER DEVELOPMENTS IN MEDICAL REFERENCE WORK

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IF we mean by the term "reference work," aid or assistance rendered to the user of a library, reference work in medical libraries probably has existed since the Dark Ages. From the time of Galen well into the Seventeenth Century the physician depended on the aphorisms of the great figures, Hippocrates and his followers, in his practice of medicine.[1] The inspired words of Hippocrates, Aristotle, Galen and later Avicenna were the foundation of medieval medicine. At that time the physician cured his patients by finding out what the early medical geniuses had done, and he acted accordingly.[2] This meant early recourse to the library. In his medical practice the library was the doctor's storehouse of information. And the librarian, in his reference capacity, had a comparatively simple task of tracking down information limited in scope and subject.

How different and how much more inclusive is the reference function in the modern medical library! Today in large medical centers reference libraries have been established, partly from the need of organizing the avalanche of literature that has piled up and partly to fulfill a demand for specialized services to users of the library.

The librarian, with his knowledge of bibliographic tools, has been able to cut paths and make light from the darkness of the multitude of medical papers, experimental research, and incidental case reports.

In order to keep abreast of the literature the librarian and medical bibliographer have continued the process of classifying articles and cross indexing them. This work has contributed to the integration of medical research. The librarian not only has made the literature accessible to the student and research worker but also by this process of classification he has brought together studies of all subjects in their related settings. It is true that skill is required to extract the total literature from the bibliographic indexes. Here is where the librarian's responsibility lies. He knows the machinery with which he works. And because of the complexities involved in tracking down references his vocation has become that of a specialist.

It is well known that research is of little practical value unless a report of it is published. It is just as axiomatic that individually published research is of little consequence unless it becomes integrated with the scheme of the whole and is made available to the scholar. Without mod-

ern indexing facilities and without competent medical librarians to guide the scholar, research would be of little consequence and individual articles would be lost.

Ten years ago Mr. James Ballard,[3] director of the Boston Medical Library, suggested a growing emphasis on the liberal interpretation of librarianship. Mr. Ballard defined bibliographic research as the assembling of relevant data for use in scientific research. To him bibliographic research meant not only the preparation of bibliographies but included the special services of abstracting materials, the translation of articles, analytic surveys of the literature and collection of case reports. Mr. Ballard's ideas have been adopted in many medical libraries, among them the library of The Mayo Clinic.

The preparation of medical bibliographies is the chief service rendered by a reference department. Some of the users of the library like to look up their own material but seek orientation from the librarian on where to find it. Others feel that the librarian should take the initiative in this bibliographic work. This means then that the librarian must be alert not only as to the use of such ordinary medical library tools as the Index Catalogue of the Surgeon General's Office, the Quarterly Cumulative Index Medicus, the Index Medicus, and the Catalogue of the Royal Society of Scientific Papers, but also in the various German Zentralblatter and Handbuch's which are not listed in the indexes but contain many excellent contributions to medical literature.

A closely related service dependent on the use of bibliographic tools is the verification of references. This is an important step in the preparation of medical papers. And the library coöperates with the division of publications in this verification. At other times the librarian is given an inadequate, emaciated piece of a reference to a supposed article in the medical literature. His task is to complete the reference. Recently such a reference was made to an article entitled, "Fifty undiagnosed cases." These cases probably went undiagnosed even as far as the librarian was concerned. No mention was made as to the subject, time, or author, and bibliographic research on this problem would have been futile. More often, however, the references can be completed. For instance, it is a simple task to complete a reference to Behring's article on giant-cell tumors.

Another service of the reference department is the answering of questions of an informative, but not of a medical character. Such questions are: What are the dimensions of the Graf Zeppelin? What is the highest speed an automobile has attained? What is the correct usage,

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"worse comes to worst" or "worst comes to worst?" A knowledge of general reference tools is a prerequisite to the answering of such questions.

Even though the library is rather complete from a modern viewpoint, there are times when certain books or journals desired are not in the library. To aid the reader there are two possibilities. The librarian may find the abstract of an article in one of the abstracting journals, or if the original article is in an unfamiliar language an abstract may similarly be found. The other possibility is to secure the journal or book from another library. This procedure, interlibrary loan, requires a special knowledge of (1) bibliographic verification of the reference, and (2) location of the place where the book is to be obtained.

Closely related to interlibrary loan service is the translating service under supervision of the librarian. It would not be hard to prove that many members of the medical profession are unable to read other than their own language. Therefore, this service is a valuable one.

A library perhaps gains in usefulness by having its shelves accessible to the readers. Open stacks, circulation of bound and unbound books and journals, and no fines for late books, where this is practicable, contribute to increased use of the library. This, of course, increases the librarian's work, because new readers need orientation in where to find various books and journals. To aid them, the librarians can give informal talks on the use of the library.

An experiment launched with considerable success at the clinic last year was a somewhat formal lecture on the principles of medical bibliography and bibliographic citation. It consisted, in the main, of an analysis of about forty of the chief bibliographic tools useful in research. This was followed by a discussion of the importance of complete bibliographic description of references to the literature, the need for verification of the completed reference and a few rules on citation.

An important service a library can offer is the recording of references to the literature as they appear. It is a problem for some workers to review the current literature. In some ways the "Kongress Zentralblatt für die gesamte innere Medizin" is useful. It would be more useful to us were it in English. The library of the clinic subscribes to about 600 journals and a librarian records new articles on particular phases of medicine at the request of members of the staff.

The librarian can render other services, such as the location of addresses of physicians on the Continent of Europe, biographic sketches, bibliographic information about new and old medical books, besides the

ordinary matters of library economy. Mention should be made of the personal services offered to users of the library. In brief these include ordering of books and caring for the binding of books for personal use.

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EARLY DENTAL LITERATURE*

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In the December, 1924-1926 issue of the *Journal of Dental Research* (vol. 5, No. 4, pp. 305-388), the author published a monograph entitled "Dental Literature, its Origin and Development." At that time, the field covered began with the invention of printing, the earliest dental literature and dentistry's debt to medicine; the last, being a record of one hundred and twenty-five physicians and writers who gave dental literature its foundation, with the dates of the various published works. This was followed by a detailed study of the various "first" dental books in each country, beginning with the editions of what I then called the "Zene Artznei's" (1530-1576). Until this study was made, there were only eight editions known and listed in our bibliographies; to these were added the four others that I uncovered: the third, a different edition of the second, 1532; the seventh, 1548; the eighth, 1549 and the eleventh, 1565, the last three being printed by Johann Daubman. This accounts for the confusion of twelve editions, when the number eight are generally given. Within the last month, I have located another, likewise printed by Daubman, in Königsberg, and up to now unrecorded, dated 1555. At that time, each edition was analyzed as to (a) contents, (b) variations noted in the different editions as to title pages, contents pages, introductions and chapters, (c) authorities quoted in the "Buchlein's," (d) miscellaneous data, (e) conclusions and (f) an inventory of the various editions and where they might be found.

Following this series were the works of Walter Hermann Ryff, 1548, and Johannes Digitus, 1586, in German; Martinez, 1557, the first in Spanish; Urbain Hemard, 1582 in French, followed by Benjamin Martin, 1679 and Pierre Fauchard, 1728, 1733, 1746, 1786; of Charles Allen, 1685, 1686 and 1687, the first dental publication in English; of Thomas Berdmore and of John Hunter; and ending with those in America by Richard C. Skinner, 1801 and by B. T. Longbotham, 1802.

In order not to make this contribution too long, I will pass over this period and will ask you to consider what I have already written an introduction to this presentation.

*Read at the Annual Meeting of the Medical Library Association, Richmond, Va., May 25, 1937.

Though I have, in the previous article, considered at some length the various editions of Fauchard, with the other literature, we will begin this study by briefly repeating a few important facts. The progress that dentistry made in its literary development up to the early part of the eighteenth century is best portrayed in the writings of Fauchard, for prior to his time, dentistry refrained from publishing anything concerning its art. He was determined to break down this practice by publishing the results of all previous studies and experiences, besides the technical details theretofore closely guarded, which according to the idea of that time, constituted the secrets of the profession. We are therefore indebted to him for the first systematic treatise on dental surgery. Though the manuscript was completed in 1723, he refused to publish the two volumes until 1728; though carefully written, in order to make it as accurate as possible, Fauchard first submitted the manuscript to medical friends for additions and corrections. This work, making two 12° volumes and altogether about nine hundred closely printed pages, gives a minute description of all that was known at that period of the anatomy, physiology and pathology of the teeth and their connections, as well as the various practical details connected with the treatment of the diseases of the mouth and the application of artificial teeth, palatine obturators, irregularities of the teeth, etc. The three editions, 1728, 1746 and 1786, as a rule are published in two volumes, though I have owned all of them bound in one, as was the German translation in 1733.

As a result of Fauchard's writings, whether it was due to the removal of the barriers of individual isolation among practitioners, or to the arousing of a latent stimulus, there followed a flood of dental literature such as the profession had not previously witnessed. Of the nearly four hundred dental treatises published prior to 1800, 142 appeared between 1530-1728, 145 between 1728 and 1778, a few more in a space of 50 years against a period of some two hundred years, and in the next twenty years, up to 1800, 106 additional.

Prior to Fauchard, there were three other important authors, who wrote in French and whose contributions should be included in our dental libraries: Benjamin Martin's, "Sur les dents," 1679, a work not difficult to obtain, and Urbain Hemard's "Recherce de la vraye anathomie des dents," 1582, the first dental book to appear in France. I know of but one copy of this work and from that I had a photostat copy made. A third was until now only known by the reference in Crowley's bibliography under No. 755. Arnauld Gilles, the author, was apparently the first dental practitioner and the first to designate himself as "Opérateur

pour le mal des Dents." The first edition of 34 pages was printed in 1621 and not 1622, as recorded by Crowley, the latter date being that of the second. Through the courtesy of the British Museum and the Bibliothèque Nationale, we now have complete photostatic copies which I am showing today for the first time. At some later date a more detailed study will be given.

Prior to the nineteenth century, there were many contributions made to the literature of dental surgery, among which we should not omit to mention those of Gerauldy, Bunon, Mouton, Lécluse, Bourdet, Jourdain and Auzébi. The full titles of their works, as well as others mentioned in this paper, will be found in the prepared bibliography. With the exception of the original suggestions of these authors, one will find that few improvements were made in dental practice until the close of the eighteenth century. Most of the publications are merely treatises on toothache. Gerauldy's excellent treatise contributed to the diffusion of knowledge relative to dental prophylaxis and therapeutics. Bunon's four admirable works on dentistry related to pathology, anatomy of the teeth, hygiene and pharmacology, and are the results of his experiments and practice in Paris hospitals, the one issued in 1746 being the first dental pharmacopoeia. Mouton's monograph, the first on mechanical dentistry, mentions for the first time the retention of partial dentures by spring clasps, which gripped the proximating natural teeth. These clasps seem to have been made of round wire, the first flat clasps being credited to James Gardette. Mouton also used gold crowns, for the arrest of the ultimate destruction of teeth. To imitate the natural ones in the front part of the mouth, the crowns were enameled, following the idea of the Phoenicians, 1000 B.C. Lécluse contributed several works, partly written in popular style and partly addressed to dental specialists, and included anatomy of the mouth, pathology and therapeutics. He invented some and perfected other instruments, the most important of which is the elevator that still bears his name. He also describes the germ of every tooth as enclosed in an extremely vascular membrane. Bernard Bourdet was one of the most important contributors to dental literature after Fauchard, a celebrated dentist and fluent writer in "whom the gift of literary and scientific culture were coupled with a vast experience and a profound spirit of observation." His works relate to pathology, hygiene and therapeutics. Bourdet made baseplates of gold to fit the alveolar ridge, with clasps and imitation gums of enamel, the teeth being set in shallow sockets and fixed with small pins. Jourdain, though a general surgeon, dedicated himself to the study and treatment of oral

and maxillary diseases, while Auzébi likewise wrote on pathology and therapeutics.

This brings us to the interesting period that relates to the invention and manufacture of mineral artificial teeth. Credit for the invention of porcelain dentures is ascribed to Duchâteau, a French chemist, who made the baseplate and the teeth entirely of enamel. This type was improved by Dubois de Chémant, but his dentures were opposed by many as being fragile and dangerous, as they easily chipped in the mouth. One of the most notable was that of M. Magiollo, an Italian dentist. Individual porcelain teeth for dentures with platinum pins was the idea of Fonzi, an Italian dentist, in 1808, and in 1821, Audibran published his work on artificial teeth.

GERMANY

Following the "Zene Artznei's" and Ryff, the next group of importance to the librarians and historians is the series that relate to the "Golden Tooth"; these were contributed by M. Ruland, Horst, Heurnius and Liddle. Other German authors of that period, worthy of mention, were Strobelberger, who gave a clear idea of the pitiful state in which the dental art still was in the first half of the seventeenth century. Purmann, a celebrated surgeon of Breslau, was the first to mention models in dental prosthesis, while Philip Pfaff, in 1756, mentioned for the first time impressions made of wax and the models of plaster. Adam Anton Brunner is represented by two works, the first treated of pathology and therapeutics and the last on physiology. One of the most distinguished dentists in the second half of the eighteenth century was Jean J. J. Serre. The works of this author show great study, very wide practice and an admirable spirit of observation and research. "They had the merit of greatly contributing to raise the level of dental culture in Germany, and one finds in them nearly a complete account of dentistry of the period." Apart from this, they possess a special interest because of the vast number of dates and important historical facts therein contained.

ITALY AND SPAIN

The first two in this group have previously been described, the first author being Eustachius, whose book is dated 1563, the second Martinez, who published in Vallodolid, Spain, in 1557. It is strange that the next work did not appear until two hundred years later, 1773, when a translation of Bourdet's work was published in Venice. In 1786, Campani of Florence published a beautifully printed book, illustrated with thirty-six plates, but otherwise it contained little that was new. This was followed

by Carnelli in Naples, on pathology, and Arrogo of Madrid on pathology and therapeutics.

GREAT BRITAIN AND FRANCE

We find that after Charles Allen's three editions (1685, 1686, 1687), nearly half a century elapsed before there was a new beginning of England's dental literature, when Joseph Hurlock, in 1742, published his treatise, in which he discusses the serious influence of seasons upon dentition. This was followed by another by Tolver in 1752. One of the first and most eminent representatives of the dental art of that period in England was Thomas Berdmore. In the year 1768, his excellent work on the disorders and deformities of the teeth and gums appeared, and this went through many editions, the last of these in Baltimore in 1844, and was translated into various languages, a splendid proof of the worth and fame of this work over a period of seventy-six years. Berdmore was the preceptor of Robert Wooffendale, the second practicing dentist in America, and the first English dentist who attempted to cover the field of dentistry; a detailed study of his 278 pages will be found in the previous article. In the same year, Ruspini, an Italian dentist, practicing in London for over thirty years, published the first of his editions of his treatise on the teeth (1768 to 1797), thus showing that his book was well received; he is especially remembered as the inventor of the mouth mirror. The last dentist of that century whose work should be in every dental library, was Robert Wooffendale, the second dental practitioner in America. Upon his return to England (1769) he completed, in 1783, his practical observations on the human teeth. This work is generally included as part of America's contribution to dental literature and the first published by a dental practitioner in this country, for Wooffendale again returned to New York in 1795 and died there in 1828.

Mention must be made of two other English contributors, both physicians and contemporaries, whose works initiated a new epoch for the dental art, which, abandoning its blind empiricism, began to take its stand on the basis of rigorous scientific observations. The first was John Hunter and the second Benjamin Bell. The latter, from the clear and precise manner in which he expresses his opinions on various questions relating to dental pathology and therapeutics, would seem to have had a much greater experience in those fields, while Hunter's observations on the anatomical and physiological side still stand today as authoritative. This part of Hunter's work on the teeth is so far superior to the parts concerning practical treatment, that we must conclude that Hunter had little or no practical experience with dentistry.

In 1771, Hunter wrote the first, and in 1778, the second, part of his "Natural History of the Human Teeth." I know of no work relating to our profession that has had more editions and translations than this book, on which the broad and firm foundation of the English school of dentistry was laid. This has subsequently been enlarged upon by Fox, Koecker, Thomas Bell, Nasmyth and other distinguished men in the dental profession. What that eminent anatomist and surgeon, John Hunter, was to the English school of dental surgery, Bichat, creator of descriptive anatomy, was to the French modern school. With others equally philosophic, he taught that no theory should be received, however plausible, which could not be proven by demonstration. Neither Hunter nor Bichat were practical dentists, but the mighty energy of their minds embraced the dental with the other branches of surgery; the principles of physiology and pathology at large included this important branch, and revealed the connection and sympathies of the teeth with the entire framework of man. Philip Blandin, Bichat's editor, himself not a practical dentist, it seems, was much better acquainted with the science of the teeth than Bichat or Cuvier, who did extensive research into osteology; they all, however, came in to aid the French dental surgeons. Serres, the Delabarre's, Maury, Lefoulon, Desirabode and others all made important contributions to the modern improvements of the art and science, building as they did on the foundation laid years before by Fauchard, Bunon, Bourdet, Lécluse, Jourdain, Baume, Laforgue and others.

In connection with comparative anatomy, there is one group of investigators that I find are seldom represented or known in dental libraries and whose work should be in every institution. They are the Cuviers, Rousseau, Geoffroy St. Hillaire, Magitot and Owen, along with Oudet, Nasmyth, Goodsir, Tomes, Demontporcelet and others of the more recent authors.

The publication in France in 1802 of a work by Laforgue, on the theory and practice of the art of the dentist, was followed in 1805 by a work written by Gariot on the diseases of the mouth, and in 1806 by an elaborate treatise by Baumes, an essay which won a prize given by the Paris Royal Society of Medicine, on first dentition and the diseases that accompany it, and in 1807 by a treatise entitled, "Manual of the Art of the Dentist," by Jourdain and Maggiolo. But besides the above-named work by Laforgue, the author of it wrote a number of articles on the diseases of the teeth, published in 1808, and his dissertation on first dentition, in 1809. In 1817, a well-written work, from the pen of Duval, was published; he also is the author of several other works, one on second denti-

tion published in 1820, and another on youth dentistry, in 1805; besides these, there were several short essays.

The next important works which we propose to notice are from the pen of C. F. Delabarre, the first being entitled "Odontology," published in 1815. In 1819, another work from the same author was published, and in 1820, his treatise on mechanical dentistry; this was translated by Isaac John Greenwood for the *American Journal of Dental Science,* the manuscript of which we have at the New York Academy of Medicine, but which never appeared in print. We are also indebted to this able writer for a treatise on second dentition, intended as a supplement to his first work on the same subject, and later translated by Chapin A. Harris in 1845.

A manual on the anatomy and physiology of the teeth, and a treatise on dental physiology, pathology and therapeutics, both written by Lemair (not to be confused with the American Le Mayeur), were published, the first 1815, and the last in 1822-24. In 1817, a study on the anatomy and physiology of the teeth and dentition, treating of the development of the teeth at an earlier foetal stage than had been described by former anatomists, and written by Serres, was also published.

Although interesting only from a physiological point of view, the work of George Cuvier, founder of comparative anatomy, and his brother, which treat on the teeth of mammiferous animals and their zoological characters, should not be passed without notice. It was published in 1825 and contains one hundred plates. It is one of the richest contributions to the science of odontology, which had appeared at the period of its publication.

Miel in 1826 gave to the dental profession a well-written and valuable work on the art of directing second dentition. In 1827, a splendid work by Rousseau, illustrated by thirty beautiful colored plates, on the comparative anatomy of the teeth of man and other animals, was brought out, and eight years previous to this time, a small treatise, by the same author, on first and second dentition, was published. But the best work on practical dentistry which had appeared in France at the period of its publication in 1822, is from the pen of J. C. F. Maury. After three editions and German translations, this was published again in Philadelphia in 1843. In 1836, we find another valuable treatise, by Blandin, on dental anatomy; this work deserves to be ranked among the first upon the subject of which it treats.

Among the writers of this time was Oudet, 1835, who gave much attention to the persistent growth of the incisor teeth of the rabbit,

and later their connection with the study of the organization of the human teeth.

In 1841, an important work by Lefoulon on the theory and practice of dental surgery made its appearance, later translated and published as part of the *American Journal of Dental Science*. A treatise by Schange on irregularity of the teeth was published in 1842. But the best elementary work on the science and art of dental surgery which appeared in France, is from the pens of Desirabode and his son. It occupies upwards of eight hundred pages and passed through two editions. The last was published in Paris in 1845 and a translation in 1849 in the *American Journal of Dental Science*. It treats on almost every subject coming within the province of the dental surgeon. Mention must be made of the contributions of William Rogers, probably an Englishman practicing in Paris, the first his encyclopedia of dentistry, 1845, and in 1846, the first dental dictionary.

To the foregoing works many more might be added, but those which we have already noticed will suffice to show the progress which the science and art of dental surgery made in France up to the middle of the nineteenth century. The French wrote much upon the subject and contributed largely to its advancement; they were its earliest and, for a long time, its most zealous cultivators. For the assiduity with which they have studied its principles, the ingenuity and talent they have brought to its aid, and the energy and zeal with which they applied themselves to the development of its resources, they are entitled to the highest praise.

Leaving the French school, we shall proceed to examine very briefly the progress which dental literature made in Great Britain during the same period. The publication of Robert Blake's inaugural dissertation on the structure of the teeth in man and various animals at Edinburgh in 1798, was followed in 1803 by the first part of Fox's celebrated treatise on the natural history and diseases of the human teeth, and in 1806 by the second part. Both of the above works hold a deservedly high place in the literature of this department of medicine; they have been quoted by almost every subsequent writer, but the second part, having more of a practical character, has been more extensively read than the former, and that portion of it which treats of the anatomy and physiology of the teeth, ranks even now among the best works extant upon the subject. The publication of this work, however, at once gave to the subject, as a branch of the healing art, an importance which it had never before had, and awakened a spirit of inquiry which soon led to the adoption of a more correct system of practice than had hitherto been pursued.

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Four years after the publication of the second part of Fox's work, there appeared a small treatise on the structure, formation and management of the teeth, by Fuller. The year following, a work written by Murphy, on the natural history of the human teeth, with a treatise on their diseases from infancy to old age, was published. But as both of the last-mentioned works were chiefly designed for the popular reader, they did not, either in a scientific or practical point of view, contribute much to the advancement of dental surgery. Other works of a somewhat similar character were published, one in 1819 written by Bew; by Snell, 1828; by Gerbeaux, 1823; by Sigmond, 1825; by A. Clark, 1825; by De la Fons, 1825; and by Levison, 1826.

But the best treatise on dental pathology and therapeutics which had come from the English press at the period of its publication in 1825, is from the pen of Leonard Koecker, and is entitled, "Principles of Dental Surgery." The dental profession is indebted to the same author for two other works, one on the diseases of the jaws, published in 1828, and the other on artificial teeth, published in 1835. All of Koecker's works showed great merit and were quoted by authorities, even down to the present day.

In 1831, a small treatise written by J. P. Clark, was published. But one of the most popular works that had yet appeared in England, is from the pen of Thomas Bell, an able and highly accomplished writer and the successor of Fox as lecturer at Guy's Hospital; this work was published in 1830 and 1831, and was written to supply a desideratum in medical literature; the aim of the author was to embody all facts known at that time. It was followed by a work on operative dental surgery, written by Snell, but previous to this period, a small work entitled, "The Surgeon Dentist's Manual," by G. Waite, had made its appearance, as well as several other small treatises. Waite is also the author of a well-written treatise on the structure and diseases of the gums. In 1835, Jobson gave to the profession a treatise on the anatomy and physiology of the teeth, and four years after the publication of this work, a treatise, written by Robertson, made its appearance, in which the chemical theory of dental caries is ably advocated.

In 1839, an historical introduction to researches on the development, structure and diseases of the teeth by A. Nasmyth, was issued, embodying the views as well as the result of the researches of almost every writer of note upon the subject. Nasmyth was also the author of three memoirs on the development and structure of the teeth and epithelium, which were published in 1841. These contain the result of a series of highly inter-

esting microscopical observations made by the author upon these subjects, and constitute a rich contribution to the science of odontology.

In 1841, a small treatise on the structure, economy and pathology of the teeth, written by Lintot, made its appearance, and soon after, a small work on the extraction of teeth by Clendon. In 1845, the publication, which had been commenced in 1840, of an elaborate and very ably written treatise on the comparative anatomy of the teeth of vertebrate animals, by Richard Owen, was completed. In this work, which is entitled "Odontography," the physiological relations, mode of development, and microscopical structure of the teeth, are minutely described. It is also illustrated by upwards of one hundred and sixty splendid lithographic plates which, with the text, form two large imperial octavo volumes.

Several valuable contributions to the literature of this branch of medicine have been made by E. Saunders, and among them are a series of lectures on the anatomy, physiology and diseases of the teeth, delivered at St. Thomas's Hospital, and published in the *London Forceps;* and a pamphlet of about eighty pages entitled "The Teeth, a Test of Age." In 1846 and 1847, a course of lectures upon dental anatomy, physiology, pathology and therapeutics, delivered by John Tomes at the Middlesex Hospital, was published in the *London Medical Gazette.* His system of dental surgery began in 1859 and was continued by his son, Charles, who likewise contributed much to comparative dental anatomy. But one of the best practical manuals upon dental surgery which has come from the English press is from the pen of James Robinson, and was published in 1846.

Many other works might be added to the list of publications on the teeth, which have been published in Great Britain since the commencement of the nineteenth century, but as most of them were intended for the general, rather than the professional, readers we do not think it necessary to extend the length of this article by mentioning them; many of them will be found in the bibliography.

GERMANY AND AUSTRIA

In Germany and Austria, dental surgery, though its progress had been less rapid there than in France and Great Britain, did attract considerable attention. Few original works, however, of much merit, emanated from that country during the early part of the nineteenth century, though many translations of the French authors were made. There are a few, however, published at Berlin and Vienna, particularly worthy

of notice, the first by Hirsch in 1796 and 1804. Three works, written by Serre, 1788, 1791 and another in 1804, that treat of dental operations and instruments, form an octavo volume of nearly six hundred pages, illustrated with upwards of thirty plates. These were followed by one by Sternberg and another by Gallette, 1830; in the latter, we find the first dental book containing a prepared bibliography of dental books. The most important contribution was made by George Carabelli, the first volume, the historical presentation, our first dental history, in 1831 and vol. 2, with an atlas in 1842. Both volumes consist of about four hundred and fifty pages and the atlas of thirty-four beautifully prepared plates. The various works by C. J. and J. Linderer treat of dental anatomy, physiology, materia medica and surgery, one forming an octavo volume of about five hundred pages, illustrated with several plates. Both of the last-mentioned treatises are very creditable productions, but, notwithstanding the merit possessed by a few of the German works upon the teeth, practical dentistry had not attained as high a degree of perfection generally in the German states and provinces, as it has in some other countries.

UNITED STATES

Although the United States may not have contributed as much to the literature of this branch of medicine as in Europe during this period, dental surgery had nevertheless progressed with as much rapidity here as there, and the works of American authors upon this subject would suffer little, if at all, by comparison with similar publications of other countries. But few elementary treatises on the subject have ever been published anywhere, and of those purporting to be such, which appeared during 1820 to 1850, American dentists contributed their full share.

American dental literature began with Richard Cort Skinner in 1801. Though I have a record of an earlier edition by him in 1796, so far no copy of it has come to light. A year later, B. T. Longbotham published his treatise on dentistry, and in 1814, another was brought out by Benjamin James.

Among the works on the teeth which have emanated from the press of this country, it may be well to mention several. In 1819, a work entitled a "Practical Guide to the Management of the Teeth," by L. S. Parmly, was published in New York, and another work from the pen of the same author, on the natural history and management of the teeth, appeared in 1821; both of these were first printed in London, 1818 and 1821 respectively.

In 1821, a small work on the disorders and treatment of the teeth, written by Eleazar Parmly, was published both in New York and London. A small treatise on the structure, formation, diseases and treatment of the human teeth, by J. F. Flagg, was published in Boston in 1822. The most complete work, up to this time, was a treatise of 144 pages by E. Gidney, published in 1824. In 1828, an essay on the structure or organization and nourishment of the human teeth, from the pen of J. Trenor, was published, and in 1829 was issued a splendid treatise of five hundred and sixty-eight pages, entitled a "System of Dental Surgery" in three parts, written by S. S. Fitch. The first part treats of dental surgery as a science, the second, on operative dental surgery, and the third, on pharmacy connected with dental surgery. This was the largest and most comprehensive work which had appeared. In 1835, a second and improved edition was brought out.

In 1833, a poem by S. Brown, with notes by E. Parmly, entitled "Dentologia," was published. Brown was also the author of a poem entitled "Dental Hygeia," 1838, and of a series of articles on mechanical dentistry, published in the *American Journal of Dental Science.* A year after the publication of the second edition of Fitch's "System of Dental Surgery," a popular treatise entitled "Guide to Sound Teeth" by S. Spooner, appeared. In 1839, a practical treatise on dental surgery, of practically four hundred octavo pages, by Chapin A. Harris, was published, which was subsequently enlarged to over twelve hundred pages, and passed through thirteen editions under the title of "Principles and Practice of Dental Surgery," the last edition in 1899. In 1843, a treatise on the anatomy, physiology and diseases of the teeth and gums, by Paul Beck Goddard, appeared, and two years later, a popular treatise on the teeth by Robert Arthur.

One of the outstanding efforts on the part of the American Society of Dental Surgeons was the publication, as supplements to the *American Journal of Dental Science,* of translations of the important dental books of Europe, as well as other outstanding dental contributions in England and America; this gave to the dental profession in this country an opportunity to obtain the best thoughts and ideas of their foreign colleagues.

At the last International Dental Congress in Vienna, I presented an exhaustive study of our dental histories and bibliographies, which was published in the *Transactions,* vol. 1, pp. 297-320; many of the above-mentioned books were reviewed in greater detail, and might be of further aid in this study.

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The following, arranged chronologically and according to language, represents the more important dental books up to about 1840.

GERMANY AND AUSTRIA

THE FIRST DENTAL BOOK, "ARTZNEY BÜCHLEIN" or "ZENE ARTZNEI'S."

1. 1530. The first edition entitled "Artzney Büchlein, wider allerlei kranckeyten und gebrechen der tzeen getzogen auss dem Galeno, Avicenna, Mesue, Cornelio Celso und andern mehr der Artzney Doctorn seher neutzlich tzu lesen," was published by Michael Blum, Leipzig. 44 pp. Octavo.
2. 1532. "Zene Artzney," Peter Jordan. Aug. Mayence. 26 pp. Quarto.
3. 1532. "Zene Artzney," Peter Jordan. Mayence. 46 pp. This edition differed in many respects from the other 1532 edition.
4. 1536. "Zene Artzney," Christian Egenolph. Frankfurt. a. M. 47 pp.
5. 1541. "Zene Artzney," Christian Egenolff. Frankfurt. a. M. 48 pp.
6. 1543. Without title page; Michael Blum. Leipzig. 49 pp.
7. 1546. Artznei Büchlein. Melchior Sachse, Erfurt. 266 pp., of which the ninth book will be found on pp. 150-162.
8. 1548. "Zene Artznei," Johan Daubman. Nürenberg. 1548.
9. 1549. "Artzney Büchlein," Johan Daubman. Nürenberg. 12 leaves or 25 pp.
10. 1555. "Artzney Büchlein," Johan Daubman. Königsberg. 12 leaves.
11. 1559. "Zeen Artznei," Chr. Egenolffs. Frankfurt. 77 pp.
12. 1563. "Zeen Artznei," Chr. Egenolffs. Erben. Frankfurt. a. M. 78 pp.
13. 1565. "Artzney Büchlein," Johann Daubman. Königsberg. 24 leaves.
14. 1576. "Zeen Artzney," Christian Egenolffs. Frankfort. 94 pp.

Of the fourteen known editions of the work (1530-1576), ten of them are published as single tracts, though a few contain one or two additional articles such as the "French Disease." In 1925, I located two unknown and entirely different editions, dated 1549 and 1565 printed by Johann Daubman in Nürnberg and Königsberg. These are not generally known, only three copies have so far been located in various medical libraries, the Boston Medical Library having the two, the College of Physicians in Philadelphia, the 1549 edition, and now the 1555 in the New York Academy of Medicine. Apparently Melchior Sachse, in 1546, gathered together thirteen early treatises written by well-known authors of the time and had them revised by a physician, of which the dental book "Zene Artzney" was one of them, the ninth. These were published as a whole, each with separate titles, under the general title of "Artzneybuch, köstlich fur mancherley Kranckheit des gantzen leibs. . . ." The authors will be listed below. This clearly indicates that dentistry at the time was considered a part of medicine. In 1548 Johann Daubman published only the dental work as a separate edition, and the following year began to reprint the entire series of Sachse. The type was again reset for the 1555 and again in 1565, as indicated by various changes in pages. The 1555 volume contains all the thirteen treatises as in the 1546 and 1549 editions and in the same order, so that the one treating of the teeth appears as the ninth, while the 1565 edition has the same arrangement, but the index calls for sixteen items. The reason for this is that the Magnus Hundt (2) is subdivided so as to make the three extra notations.

The contents for the four collected series are:

1. Tarquinius Ocyorus alias Schnellenberg. Experimenta. Von XX Pestilentzwurtzeln und Kreutern . . . 3 i Fol. 1-38. A very popular pharmacological plague tract.

2. Magnus Hundt. Ein Nutzliches Regiment . . . kranckheit der Brust, wider den Husten, Brustseuche . . . Fol. 39-69.
3. Johannes von Parisiis. Ein new Wund Artzney . . . Fol. 70-86.
4. Lorentz Burres von Neunkirchen. Ein new Wund Artzney büchlein. Fol. 86 vo.-102.
5. Johannes Charetanus (i.e. de Ketham or Kirchheim). Wundartzney zu allen gebrechen des ganzen Leibs. Fol. 103-17.
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U. S. Surgeon-General's Office. Annual report. . . . Library division, 1937: 223-227.

At present the Army Medical Library has 400,000 bound volumes; a total of 1,000,000 items including pamphlets, theses, etc. It receives 1,825 periodicals. Statistics for the fiscal year 1936-37 show:

3,813 bound volumes added
11,949 pamphlets added
13,886 books loaned to 388 libraries
6,000 readers registered in the reading rooms

Volume 2 of the 4th series of the Index Catalogue was completed May, 1937.

Needs are many. A survey shows that the subscription list should be increased to include some 2000 journals. Many worth-while books cannot be purchased because of lack of funds. A large number of volumes are in need of rebinding. If funds permitted the rebinding of 500 volumes per year, all books could be put in usable condition within a few years. Library staff is too small to assure uninterrupted good service; additional physical accommodations, preferably a new building, are urgently needed. Increased appropriations will solve most problems.

See also: The Army Medical Library, *Med. Times,* 65:523-526 (Oct. 1937); Portrait gallery of Physicians; Collection in Army Medical Library. By H. W. Jones. *Ann. Med. Hist.,* 9:517-532 (Nov. 1937).

The Library of the New York Academy of Medicine. *Med. Times,* 65: 581-584 (Nov. 1937).

The Library of the New York Academy of Medicine which was founded in 1846 is today the second largest medical library both in the United States and in Europe. It bows to the Army Medical Library and to the Library of the Faculty of Medicine in Paris. From the date of its founding to the present unfurls a story of rapid growth aided by munificent gifts from the Carnegie Corporation, the Rockefeller Foundation and private donors. In 1925 the cornerstone of the present building was laid. Plans were such that future expansion is practicable. The building houses over 218,000 volumes. In 1937 the library budget was over $100,000. Illustrations include the library building, a picture of the present Librarian and views of two reading rooms.

Boston Medical Library. *Med. Times,* 66: 29-33, 54 (Jan. 1938).

The Boston Medical Library was founded in 1875. Through the years it has accumulated a collection of over 176,000 volumes and 118,000 catalogued pamphlets. Particularly noteworthy is the library's historical collection which includes about 100 manuscripts dating from 1200 to 1800 and 620 incunabula. The 16th and 17th centuries are also richly represented. Included is the collection of Storer medical medals, seals, etc. Of international note is the Hyams' collection of medical and scientific Hebraica and Judaica. This library is open not only to members but to the public. It is a central depository for the libraries of greater Boston and cooperates with them to avoid duplication and to secure proper allocation of material.

The Library of the College of Physicians of Philadelphia. *Med. Times,* 65: 622-624 (Dec. 1937).

The Library of the College of Physicians of Philadelphia is the oldest extant medical library in the United States. In December 1788 it received its first donation of books. Slowly at first, but more rapidly during the second half of the last century, it has grown to become one of the largest medical libraries in the United States. Its collection numbers some 150,000 bound volumes; it has a subscription list of about 1,100 scientific periodicals; a collection of 33,000 portraits and hundreds of autographs of men and women connected with medicine. Its historical collection includes a large number of incunabula.

Library of the Medical Society of the County of Kings and Academy of Medicine of Brooklyn. *Med. Times,* 66: 84-89, 101 (Feb. 1938).

This library was founded in 1844. Then followed years of steady growth. In 1900 a new building was erected — a fireproof structure with steel stacks. But continued growth has made the building inadequate. Today the library has over 143,000 volumes and receives over 1500 medical and dental periodicals. It is rich in historical and biographical material, both local and general; it has 26 medical incunabula.

HISTORY OF THE LIBRARY OF THE ACADEMY OF MEDICINE, TORONTO. By H. B. Anderson. *Bull. Acad. of Med., Toronto,* 11:142-153 (April 1938)

Briefly the history of medical societies in Toronto from 1834-1888 is outlined. In the latter year the Ontario Medical Association was incorporated, and the following year the annual report stated that the library had 1,300 bound volumes, 250 unbound volumes and 59 journals. But affairs of the library did not prosper and it led a precarious existence for almost two decades. When in 1907 the Association amalgamated with three other local medical societies in Toronto to form the Academy of Medicine, a new era was begun. The library became the nucleus of the Academy. With reorganization came prosperity. By 1921 increased accommodations for the library were urgently needed and funds amounting to $25,000 were raised for the erection of a large reading room. Again in 1924 more space was needed. A site has been selected in the medical center of Toronto but it is not yet certain whether the property can be acquired. To date the library has over 27,000 volumes. It is the largest and most active special library in the province.

See also: (1) Sixteenth Century Books in the Academy of Medicine, Toronto. By Jabez H. Elliott. *Bull. Acad. of Med.,* Toronto, 11:162-170 (April 1938); (2) Seventeenth Century Books in the Academy of Medicine, Toronto. By M. H. V. Cameron. *Bull. Acad. of Med., Toronto,* 11:171-173 (April 1938).

MICROFILMS MAKE INFORMATION ACCESSIBLE. By Watson Davis. *Special Libraries,* 29: 35-37 (Feb. 1938).

Advantages of microphotography are pointed out. Microfilms preserve as they copy and reduce in volume. Bibliofilm Service, operated by the American Documentation Institute, has access to about 90 per cent of the world's literature. Films can be made of books in the Library of the U. S. Department of Agriculture, the Library of Congress and the Army Medical Library. Costs are small — just a little more than a cent per page. Much material that because of costs could not be printed will be made available by auxiliary publication or Ducofilm Service. That is, only abstracts of lengthy articles will be published in the journal literature. At the end will be a document number and a notation that a microfilm of the complete article with diagrams, illustrations, etc., can be obtained from the Institute by remitting a given price. Microfilms are made when ordered. Only the document itself and the microfilm negative are stored. It is suggested that microphotography will ultimately be extended to other services such as the preparation of a world bibliography.

First Steps in Microphotography. By M. L. Raney. *Bull. A. L. A.* 32: 164-166 (March 1938).

Details of how to proceed in the establishment of a microphotographic department are given. Where to get the needed items and costs are enumerated. For example a reading machine may be obtained for $75.00; a Photorecord camera for $265.00; dark-room equipment for $58.15; enlarger for $87.50. Thus $500.00 will purchase the necessary equipment.

See also: *Journal of documentary reproduction*, vol. 1, no. 1, March 1938.

The Reference Librarian. By Dorothy M. Fenton. *Jour. of Higher Education*, 9: 153-156 (March 1938).

As the chief librarian is occupied with administrative work and book purchasing and the circulation librarian cannot spare the time from routine duties, so the reference librarian must coordinate teaching activities with library resources. At present insufficient emphasis is given to the reference service. Statistics show that of the 2,403 members of the A. L. A. who are librarians in institutions of higher learning, only 296 are reference librarians. Circulation statistics alone are not a measure of effective teaching. To vitalize reference service more reference librarians of high professional standing are needed.

Librarian or Specialist? By Robert Whitford. *Lib. Jour.*, 63: 224-226 (March 15, 1938).

In answer to the query different views are presented in direct quotations. First is given the case in favor of subject knowledge; second the case in favor of librarianship and last comes the compromise — a combination of the two. It is concluded that the technical librarian must be a professional librarian who acquires a knowledge of the subject matter of his library and he must be able "to translate from German and French and other languages" and must have "power of analysis and comprehension, clarity of expression, and finally an attribute often overlooked — speed, without sacrifice of accuracy."

J. W. H.

ASSOCIATION NOTES

President's Letter

When Louvain was destroyed, the libraries of the United States played a great part in the restoration of the Library of the University. Chaotic conditions are now existing in Spain and China and again we are asked to help rebuild libraries destroyed as acts of war.

The Library Association of China, through the Chairman of its Board, Mr. T. L. Yuan, has made a direct appeal to your President for aid in restocking the medical libraries of China when the present undeclared war has terminated.

The common, everyday, good periodicals should be saved until a definite plan is worked out for collecting and shipping the material at some future date. The matter will be presented to your Executive Board at the meeting in Boston and probably some recommendation made to the Medical Library Association.

Funds are urgently needed to care for the essential needs of the Association. Miss Hallam has been working very hard and to April first her committee has added to the rolls 24 supporting members and 28 professional members. Miss Hallam has set a good example by obtaining twelve, half the total, from her native city of Portland, Oregon. Your President has to date only signed up six supporting members and feels rather ashamed at being surpassed by the Far West.

It should not be difficult for every Library in the Association to add to the membership one professional and two supporting members.

Then we could have a paid secretary!

Boston has the reputation of doing things well and the June convention is not going to be the exception to the rule. Plan to take your vacation in the East this year and attend the meetings June 28-30th. The Program and Entertainment Committee is doing a good job and a number of pleasant surprises await you. Reserve your room now.

The 40th meeting should establish an attendance record.

Patronize our advertisers. They help us, we should help them.

James F. Ballard,
President.

XUM

Membership Committee

On May 2, 1898, a group of eight people met in the office of Dr. G. M. Gould, physician, publisher, lexicographer of Philadelphia, to found an association of medical libraries. The group was composed of those for whom medical libraries exist plus those who administer the libraries. From that time to this, the Association has continued to serve these interests and from the tiny beginning has grown to include nearly 250 medical libraries and many individuals on its membership roll. Library-minded physicians have identified themselves with the association by becoming Supporting Members so that they may aid in the dissemination of medical literature and in the betterment of medical libraries. Librarians have become Professional Members so that they may be in touch with the work of this professional organization. DO YOU KNOW OF ANYONE WHO MIGHT LIKE TO JOIN? We will be glad to receive applications at any time.

Bertha B. Hallam,
Chairman, Membership Committee, M. L. A.
University of Oregon Medical School Library
Portland, Oregon.

New Members, January-March 1938

Library Membership:

Abbott Laboratories Library, North Chicago, Illinois
Mary Imogene Bassett Hospital Library, Cooperstown, N. Y.
Brittingham Memorial Library, City Hospital, Cleveland, Ohio
Cook County Hospital Medical Library, Chicago, Illinois
Grant Hospital Medical Library, Chicago, Illinois
Hamilton Academy of Medicine Library, Hamilton, Ontario, Canada
James M. Jackson Memorial Hospital Library, Miami, Florida
Worcester Medical Library, Inc., Worcester, Mass.

Professional Membership:

Eva May Alcorn, Washington Univ. School Medicine Library, St. Louis, Missouri
Isabelle T. Anderson Ramsey County Medical Soc. Library, St. Paul, Minnesota
Dr. George L. Banay, Worcester State Hospital Library, Worcester, Mass.
Mary O. Boynton, Univ. Vermont Medical Library, Burlington, Vermont

Mrs. Eleanor N. Coffyn, Boston Medical Library, Boston, Mass.
Marion F. Dondale, Albany Medical College Library, Albany, N. Y.
Thomas P. Fleming, College of Physicians and Surgeons Library, New York City
Anna C. Holt, Harvard Med. Sch. Library, Boston, Mass.
Mrs. Minnie G. Loevenhart, Univ. Wisconsin Medical Library, Madison, Wis.
Alice M. McCann, Univ. Pittsburgh, School of Dentistry Library, Pittsburgh, Penn.
Mrs. Madeline P. Mahoney, Medical Branch, Free Public Library, Atlantic City, N. J.
Mrs. Madelene Marshall, Northwestern Univ. Dental School Library, Chicago, Illinois
Margaret O'Byrne, Georgetown Univ. Medical School Library, Washington, D. C.
Mrs. Charlotte H. Peters, Laboratory of Physiology, Yale Univ. Sch. Medicine, New Haven, Conn.
Gladys Ramsey, Univ. Wisconsin Medical School Library, Madison, Wisconsin
Alice Virginia Rogers, New Orleans, Louisiana
Dorothy L. Ruble, Biological Medical Library, Univ. Minnesota, Minneapolis, Minn.
Helen Symonds, Boston City Hospital Medical Library, Boston, Mass.
Dr. Jeannette Dean-Throckmorton, Iowa State Medical Library, Des Moines, Iowa
Florence E. Turner, Boston Medical Library, Boston, Mass.
Mrs. Elsie A. VanAllen, Hotel Regent, New York City
Louise Walker, Archibald Church Library, Northwestern Univ. Medical School, Chicago, Illinois
Marjorie Wildes, Yale University, School of Medicine Library, New Haven, Conn.
Julia E. Wilson, Univ. Maryland Medical School Library, Baltimore, Maryland
Mrs. Zoe Wright, W. K. Kellogg Foundation, Battle Creek, Michigan
Isabella F. Young, 58 Channing Street, N. W., Washington, D. C.
Rose H. Zissman, Mt. Sinai Hospital, Chicago, Illinois

Supporting Membership:

Marr Bisaillon, M.D., Portland, Oregon
I. C. Brill, M.D., Portland, Oregon
Madeline R. Brown, M.D., Boston, Massachusetts

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Wallace H. Cole, M.D., St. Paul, Minnesota
R. B. Dillehunt, M.D., Portland, Oregon
Ralph A. Fenton, M.D., Portland, Oregon
John Farquhar Fulton, M.D., New Haven, Connecticut
Otto C. Gaub, M.D., Pittsburgh, Pennsylvania
Mr. E. P. Goldschmidt, 45 Old Bond Street, London, W1, England
Mr. Paul Gottschalk, The Hague, Holland
Thomas M. Joyce, M.D., Portland, Oregon
Emerson C. Kelly, M.D., Albany, New York
F. A. Kiehle, M.D., Portland, Oregon
Albert Mathieu, M.D., Portland, Oregon
Ralph C. Matson, M.D., Portland, Oregon
Hyman Miller, M.D., Los Angeles, California
G. R. Minot, Thorndike Memorial Laboratory, Boston City Hospital, Boston, Mass.
Frank R. Mount, M.D., Portland, Oregon
Charles F. Painter, M.D., Boston, Massachusetts
Goodrich C. Schauffler, M.D., Portland, Oregon
A. B. Schwartz, M.D., Milwaukee, Wisconsin
Laurence Selling, M.D., Portland, Oregon
Robert M. Stecher, M.D., Cleveland, Ohio
M. E. Steinberg, M.D., Portland, Oregon

Program and Entertainment Committee

The Committee requests the members who are planning to attend the Boston meeting the week of June 26th, to make early reservations at the Hotel Somerset. The Function slip as well as the Friday trips slip should be returned promptly to the Committee at 25 Shattuck Street, Boston. Extra Function slips may be had from the Committee.

Medical Library Association

40th Annual Meeting
Boston, June 28-30, 1938
Headquarters: Hotel Somerset

PRELIMINARY PROGRAM

Monday, June 27

Open house at all Boston Libraries.
Committee meetings.

Tuesday, June 28

Boston Medical Library. Business meeting. Dental meeting.
Evening: Play.

Wednesday, June 29

Harvard Medical School.
Institute for Medical Librarians. Under the direction of Mr. Herman H. Henkle, Director, School of Library Science, Simmons College.
General subject: Medical Literature.
Morning session: Guide to Medical Literature; a symposium.
Speakers: Henry R. Viets, M.D., Mrs. Eileen R. Cunningham, Miss Isabelle T. Anderson and Mr. Henkle.
Afternoon session: Medical Literature of the past.
Speakers: Sanford V. Larkey, M.D., James F. Ballard and John F. Fulton, M.D.
Evening: Banquet.

Thursday, June 30

Morning session: Boston Medical Library.
Final business session.
Afternoon session: Massachusetts General Hospital, Boston City Hospital and Gardner Museum.

NOMINATING COMMITTEE

Medical Library Association
Ballot 1938-1939

President	Mr. James F. Ballard
Vice-President	Dr. George R. Minot
Secretary	Miss Janet Doe
Treasurer	Miss Louise D. C. King
Executive Committee (For three years)	Miss Charlotte E. Coffman Miss Mary Louise Marshall
Nominating Committee (For three years)	Miss Frida Pliefke

Respectfully submitted,

THE NOMINATING COMMITTEE,

ISABELLE T. ANDERSON, *Chairman,*
ELISABETH D. RUNGE,
LILY HANVEY ALDERSON.

Further nominations may be made from the floor prior to the election of officers.

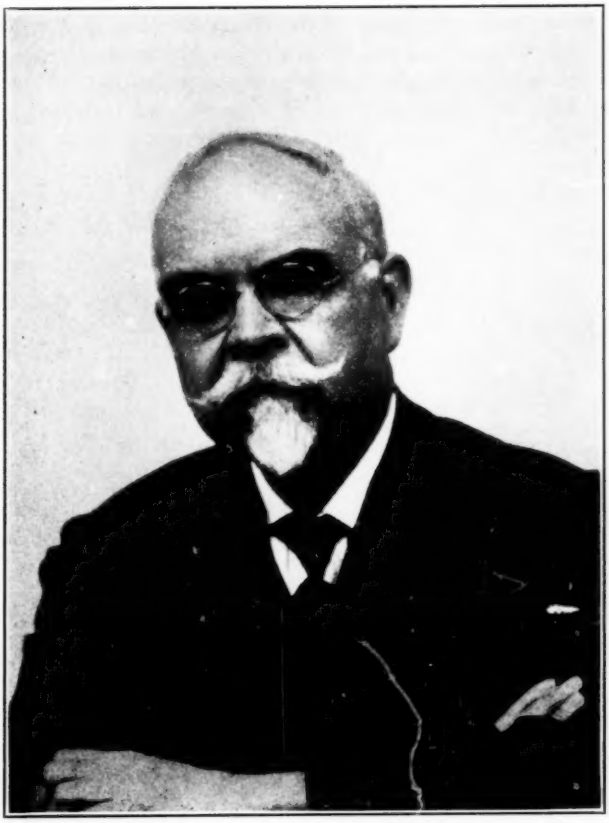
Secretary

THE NEW MEMBERSHIP BLANKS

The Secretary wishes to thank all the library members of the Association for their prompt and painstaking return of the new blanks. The information, collected in this way, is exceedingly valuable for our files, and, we hope, will form the basis of a very useful handbook of our membership. The time and trouble which everyone spent in filling out the forms, is much appreciated.

All the libraries, who have not already returned these forms, are earnestly urged to do so as soon as possible, so that our record may be complete at the Annual Meeting.

J. D.



Dr. Rudolph Matas

Tulane University of Louisiana

School of Medicine

MISCELLANEOUS NOTES

The Rudolph Matas Medical Library

On November 29, 1937, with due ceremony, Dr. Rufus Carrollton Harris, President of Tulane University, christened the Library of the Medical School the Rudolph Matas Medical Library. Dr. Matas was a Supporting Member of the Medical Library Association and was made an Honorary member in 1930.

In his address on this occasion, Dr. C. C. Bass, Dean of the School of Medicine said, in part,—

"Without the library facilities here, how different medical education, medical research and medical practice in New Orleans would be. Here in one repository, in comfortable quarters, under an able, efficient and willing library staff, are more than 50,000 books and bound volumes and more than 500 current medical periodicals, at the beck and call of every medical student and every medical man or woman who wishes to use them. Here the physician or student can present his questions on any subject to the authorities of the world, past and present, and receive back their answers as quickly as he can read them.

"The best remedy for the 'blues' and the best way to forget discouragement about the progress of medicine, that I know, is to peep into the reading rooms of the Library, as I have done often, and see twenty-five, fifty and more students, teachers and physicians of the community there working and storing up in their own minds and souls the knowledge and thoughts so bountifully gathered there for them; or to arrive early on a Monday morning and see on the receiving tables, the loads of books and material which were taken out for use over the week-end. It gives me a real thrill and a boost of spirits every time I see it. . . .

"As far back as 1843 there were in the medical school building of the University of Louisiana, which later (in 1884) became the Tulane University of Louisiana, two small rooms for a library and reading room. When the University started operation again in 1866, after a brief suspension during the Civil War, a few scattered old books, uncatalogued and unindexed, were assembled in a reading room which was established for students and professors in the east wing of the medical building. The new building for the medical school, the Richardson Memorial, on Canal Street, was completed in 1893. In it, for the first time, was provision made for the long needed space for the medical library. . . .

"In 1920, the domicile and library of the Orleans Parish Medical Society was moved to the Medical School Building, then the Hutchinson

Memorial and . . . in 1928 an agreement was made between the School and the Society for the technical administration of the two libraries jointly. Miss Marshall was appointed . . . as Librarian . . . thus making her acting head of both, which position she still occupies. . . .

"When the new Hutchinson Memorial was erected in 1930, space was provided for the domicile of the Orleans Parish Medical Society and the State Medical Society—the organized medical profession of the community—on the first floor, and for the care of the Society's library, jointly with our own, on the second floor, with a view to a continuation of the joint technical administration which, to this day, has been most satisfactory and beneficial to all concerned. . . .

"Tonight's occasion is an important event in the medical history of this community and I wish to record the fact, here and now, that the idea of naming the Library after Dr. Matas originated in the mind of Dr. Isaac Ivan Lemann. The rest of us—members of the Faculty, the Dean, the President and the Board of Administrators—unanimously endorsed and promoted its accomplishment but Dr. Lemann originated it. Let the credit be placed where the credit belongs.

"As Dr. Lemann foresaw, the labelling of every volume with the name of the distinguished master, will not only honor him in our all-too-feeble way, but it will greatly enhance the educational, cultural and practical value of the library. Every reader, whether undergraduate, student or physician, will have this star always before him to encourage him on to greater effort and higher attainment. . . .

"The volume and usefulness of the library has been greatly increased by generous donations of books, journals and other material, from members of the faculty, alumni and other physicians and the families of deceased physicians. But the largest donor of valuable material of this kind has been Dr. Matas. For years he has been passing on to this library hundreds and hundreds of volumes from his own private collection. Many have been purchased for the library out of his own pocket and placed there directly. Not only has he been a contributor but he has been a collector for the library and it has been through his efforts and influence that much other valuable material has been secured.

"Not only has he contributed so largely of books and publications, but he has been keenly interested in Medicine in Art and has collected or promoted the collection of enough material of this nature already to crowd the museum room in the library. There are many old prints and medical caricatures. The library now has over 1500 mounted portraits of physicians, largely through his interest.

"But all of these contributions from Dr. Matas, which go a long way to make this library what it is, are no more important than the influence of the example he has set as a teacher, consultant, author and research worker, of appreciation and use of the library. . . .

"This *is* the Rudolph Matas Medical Library. It *always has been* the Rudolph Matas Medical Library. We are now only formally and more permanently recording this long-recognized and well-known fact. In this, as in a thousand other ways, the name and influence of our own Dr. Matas, one of the foremost men in medicine in modern times, redounds to the everlasting benefit of the community of New Orleans, of the community of Louisiana, of the Community of the Southland, of the community of America, of the community of the whole world."

The Rudolph Matas Medical Library numbers in its collection some 30,168 bound volumes, 2500 original pamphlets, 1500 mounted portraits, 60,000 reprints, 250 medical bookplates, and an extensive collection illustrative of Medicine in Art. The Library receives currently more than 350 medical periodicals, many of them made possible through the benefits of the Maurice Stern Fund. Three special collections are deserving of particular mention,—The Feingold Library of Ophthalmology, The Kells Library of Dentistry, and the recently established Isaac Ivan Lemann Collection on Diabetes.

Under joint administration with the Rudolph Matas Medical Library and cooperating with it, is the Library of the Orleans Parish Medical Society, containing some 22,436 bound volumes and receiving currently more than 230 medical periodicals.

Free to Librarians

Victor D. Brenner's bas-relief, "The Future Promise of Hygiene," made for the 1912 International Congress on Hygiene and Demography, held at Washington, may be had by applying to Dr. R. H. Riley, Director, State Department of Health, 2411 North Charles Street, Baltimore, Maryland.

The late Dr. John Samuel Fulton, in commenting on the work of Mr. Brenner, characterized it as an attempt to symbolize in a eugenic manner the present aspect and future promise of hygiene.

The Medical Library Association is indebted to Dr. Riley for his kindness in making this beautiful medal available to members of the association.

Boston Medical Library

The Boston Medical Library has added to its Spanish collection a lot of thirteen items, including eleven Mexican imprints dating from 1615 to 1830. The Mexican books are in unusually fine condition, in mint state, and include perfect copies of Hernandez (Franciscus) Quatro Libros . . . Mexico, 1615; a first edition of Lopez (Gregorio) Tesoro de Medicinas . . ., Mexico, 1672; and a complete set of the Mercurio Voltane, in sixteen numbers, Mexico, 17 Oct. 1772-Feb. 10, 1773. The last is the first medical periodical to be printed in America and is one of two recorded complete sets. The Library would be glad to hear from libraries and individuals having any numbers of this periodical.

Cleveland Medical Library Association

The Cleveland Medical Library Association announces the receipt of a bequest of approximately $7,000 to $8,000 under the will of Mrs. Ida Ford Marvel. "The fund shall be known as the Cozad-Ford Homestead Collection upon Malignant Tumors, in commemoration of three generations of Cozads and three of Fords, who owned and occupied the land upon which the Medical Library is situated. The income from the bequest is to establish and maintain a library on the study of malignant tumors; to foster library research upon malignant tumors; or to provide for public lectures on the subject of malignant tumors, to be given by eminent persons." The Association is also the recipient of the residue in the treasury of the dissolved Cleveland Dental Library Association. The money will probably be used for books and journals to be kept on a book shelf dedicated to the Cleveland Dental Library Association.

Mississippi State Board of Health

The Medical and Public Health Library of the Mississippi State Board of Health is the recipient of a gift of over twelve hundred volumes from Dr. W. A. Evans, native of Aberdeen, Mississippi. For many years health officer of Chicago, and a pioneer in health education procedures, Dr. Evans is perhaps best known throughout the country for his "How to Keep Well" articles. Because of his contributions to health and to medical science generally, his gift is a prized one and truly characterizes the qualities of the donor and his ambition to continue the improvement of health and medical standards.

University of Illinois

Under date of January 17, 1938, the Illini News has the following item. "One of the most valuable assets in connection with the opening of the new medical building in Chicago recently is the library of medical books given by Dr. Arthur E. Hertzler, Professor of Surgery in the University of Kansas. The collection containing 7,000 volumes is considered one of the most valuable in the world. . . . He chose the University of Illinois College of Medicine as a permanent place for his library because of the wide use it will obtain there through its proximity to Cook County Hospital. The gift was made unconditionally and will be housed separately in special rooms where about 1,200 linear feet of shelf space will be required to accommodate the volumes."

University of North Carolina

A gift of $1,000 from Mrs. Charles E. Kistler, Morganton, has been received by the University of North Carolina School of Medicine, Chapel Hill. Mrs. Kistler made the gift in honor of the late Mr. Kistler, a graduate of the University who had a special interest in the medical school.

University of Oregon

The University of Oregon has received a sum of $200,000 to be used for an addition to the Medical School building, to house a medical library. $100,000 of this amount was donated by the Rockefeller Foundation, and $100,000 by an unnamed donor.

Personals

In January, Dr. Henry R. Viets, Chairman of the Publication Committee, was elected Librarian of the Boston Medical Library. He is also Secretary-Treasurer of the History of Science Society.

Miss Marguerite E. Campbell, Librarian of the Chicago Medical School, has been dangerously ill from a hemolytic-streptococcus infection of the throat, but is now on the way to recovery and hopes to attend the Boston convention.

Librarians Honored

At the establishment of the Brittingham Library at the City Hospital in Cleveland, Mr. J. C. Harding, Librarian of the Cleveland Medical Library Association, was appointed Consultant Librarian. This was a fitting

tribute to a man who has helped to make his library one of the important medical libraries of the United States.

Dr. Walter R. Steiner was honored at a dinner given by friends at the Hartford Club on February 7th, and after an address by Dr. Archibald Malloch of the New York Academy of Medicine, a portrait of Dr. Steiner, gift of a friend and patient, was presented to the Society. The Hartford Medical Society has recently named its library for Dr. Steiner.

I. T. A.

THE ASSOCIATION OF SPECIAL LIBRARIES AND INFORMATION BUREAUX

Fifteenth Annual Conference

Oxford, September 23-26, 1938

The ASLIB Conference will overlap the end of the Fourteenth International Conference of the International Federation for Documentation. One or two joint sessions will be held at the week-end. It is hoped that papers on the following and other subjects will be read:—

> The work of the Imperial Institute.—British tools for Library co-operation.—A Review of technical periodical literature.—A Survey of the facilities offered to research workers and students at the London museums and galleries.—A survey of the storage, issue and use of English and foreign patents in London and the provinces.—The use of information for the Arts.—A Critical account of published statistical information for industry.

An inclusive fee of £3 will be charged for the ASLIB Conference but a special inclusive Conference fee is being arranged for those wishing to attend both Conferences. Communications concerning the ASLIB Conference should be addressed to the General Secretary, Miss E. M. R. Ditmas, M.A., Association of Special Libraries and Information Bureaux, 31, Museum Street, London, W. C. 1.

J. D.

Fourteenth International Conference on Documentation

Oxford, September 21-26, 1938

The International Federation for Documentation will hold its fourteenth International Conference on Documentation under the Presidency of Sir William Bragg, O. M., President of the Royal Society, at Lady Margaret Hall, commencing on Wednesday morning, 21st September, until Sunday, 25th September. Thereafter, members of the Conference will visit the Science Museum, London, on Monday, 26th September.

Advantage will be taken of the meeting being in England to hold Joint Sessions on the mornings of Saturday and Sunday with the Association of Special Libraries and Information Bureaux.

Papers will be read by leading authorities from all countries upon aspects of the following, and other subjects: Theories of Classification, Cataloguing and Indexing — Methods and Apparatus used in the Organisation of Libraries, Archive Repositories, Registering and Filing Centres — Photographic and other Copying processes in their Application to Bibliographical Problems — The Making of Abstracts from periodical Literature; possibilities of co-operation — Directories of Information — Exchanges between Publishing Bodies, National and International — The Loan of Books and Documents; principles and possibilities — The Practical Application and Use of Bibliographies. In particular an effort will be made to obtain adequate representation of the varying points of view of workers in diverse fields. At a recent International Congress the view was expressed that it was desirable to widen the bases of International Bibliography and Documentation. At the forthcoming Conference a special attempt will be made to secure authoritative reports upon the present state of bibliographical work in such fields of learning as Archaeology, Archive work, Economics, History and Linguistic Studies, in addition to the Natural Sciences and their Applications.

The programme will include visits to some of the many interesting places in the neighbourhood, together with other social functions. The total cost, exclusive of reports and visits, will not exceed £1 a day.

The Secretary is Miss M. Gosset, The Science Library, South Kensington, London, S. W. 7.

XUM

Marcel Godet. Le Prêt International Des Livres Et Manuscripts; Étude Accompagnée De Tableaux Et Cartes Statistiques Suivie De La Résolution Adoptée Par Le IIe Congrès International Des Bibliothèques. Berne, en vente à La Bibliothèque Nationale Suisse, 1937. 31p. 8°. (Publications de l'Association des Bibliothécaires suisses, XV.)

Every library cannot buy every new book; nor can it possess every old book. Cooperation has become a necessity, and international lending the method of meeting it. To determine the existing status of international loans, M. Godet began by circularizing the countries represented in the International Federation of Library Associations, together with certain others, requesting their statistics of such loans for the year 1934. Unfortunately only Poland, Sweden and Switzerland had kept figures. But he had asked also whether these loans were increasing or decreasing and what was each library's broad opinion on the situation. Replies from thirty-one countries, though necessarily imperfect, did indicate general conditions, and covered at least a part of such loans throughout the world.

Briefly summarized, the figures for one year as given in tables and diagrams, show most interesting conclusions. More than 300 libraries sent more than 11,450 volumes across their frontiers. Germany is far ahead of all countries in lending, while she maintains an appreciable lead in borrowing. Austria, Switzerland, and Sweden follow in order of total loans and borrowings, while the United States stands surprisingly low. This last is due, doubtless, to the fact that it is a very large country and does a great deal of lending between libraries within its own territory. When one compares the proportions between each country's lending and its borrowing, — what M. Godet calls the "active and passive balance" — Germany still stands at the top; but now the United States comes second, because its loans so far outweigh its borrowings. The probable reason for the lead of these two countries is that both possess rich collections, a libe al lending policy, and near neighbors of lesser resources and a common language. Great Britain stands third and Sweden fourth, the latter serving all the Scandinavian countries to a large extent.

The proportion between loans involving printed books and manuscripts arouses interest. Germany loaned twenty-eight times as many books as manuscripts, while France loaned only two and one half times as many, and Belgium borrowed half as many manuscripts as books.

The State Library at Munich, alone among the large libraries, borrowed more manuscripts than books, illustrating its importance as an international center for the study of manuscripts.

A comparison of lending and borrowing per capita is made graphic for the countries of Europe by a shaded map. Switzerland has the highest rate for loans; next are Austria, Sweden and Denmark. Among the per capita borrowers, Denmark is highest, Switzerland next, then Finland and Austria. It is evident, then, that research scholars were willing to pay transportation, often heavy, for as many as 11,450 volumes in one year. Books passed not only between Europe and America, but to the ends of Africa and Asia. Loans prospered especially in Northern Europe, where there are rich libraries, a common language, and intellectual vitality.

It is striking to see how entirely different situations have developed in two adjoining countries. In France the political and intellectual center is Paris, where an immense literary wealth is concentrated and where scholars congregate to consult the books. If they were loaned away from Paris, there would be the risk of loss, and readers who came there to see them would be disappointed. In Germany, on the other hand, the excellent state libraries of the various principalities have developed an extensive system of loans. In a centralized regime, the reader comes to the book: in a de-centralized one, the book goes to the reader. Other circumstances also have a bearing on the number of loans in the various countries, such as the existence of a union catalogue, of a printed catalogue, and of an active spirit of intellectual inquiry. International loans seem to be increasing in Spain and Italy, where they have hitherto been slight, and to be decreasing in Germany in the last couple of years prior to 1934. There is great variety in the methods of lending in various countries: some prefer to have all loans go through a central bureau, as in France and England, while others want direct dealing between the two libraries concerned, as in Holland and Denmark. It is to be remarked that no library complained of loss or damage.

M. Godet believes that international loans would be much more numerous if more people realized how easy they are to accomplish. There is surprising ignorance of this on the part of libraries as well as readers. Loans prosper most when made directly from library to library. Intellectual inquiry should be cultivated. Research has no frontiers, and science requires international cooperation. A few simple regulations are all that are needed. The Swiss Library Association drew up a resolution for the Second International Library Congress, Madrid, 1935, which tried

to conciliate the differences in the usage of different countries, and it was unanimously adopted as follows:

1. The three fundamentals of international loans are: a) reciprocity, generously interpreted, b) the undertaking by the borrowing library of responsibility for transportation charges, return, and insurance, c) the responsibility for loss or damage.
2. Methods should be as simple, rapid, safe and cheap as possible.
3. Direct dealing between libraries is usually desirable, but in the common interest certain general rules should be established and developed.
4. Each library should be sure the book to be requested is not already in its country.
5. It is desirable that each country should have a central bibliographical bureau with a union catalogue of the country's resources.
6. The Federation's Committee will draw up rules for international loans which will be printed and distributed among the central bureaus and interested libraries of each country.
7. These libraries which are interested and authorized to do so will be invited to notify their central bureau of their desire to participate in such loans.
8. These libraries will be asked to keep statistics of such loans, which will be transmitted through their central bureau to the Federation annually.
9. They will be asked to report to their central bureau whatever additional bibliographical facilities they possess, such as photostatic equipment, etc.
10. Model forms for international loans will be established by the Federation, which must be used by all participating libraries.
11. A special postal or express cover will be inaugurated, so that the parcels will show to the officials of all countries that they are international loans between libraries and not subject to duty.

Thus the libraries of the world have attempted to gauge the present extent and future possibilities of the lending of books and manuscripts. They conclude that the value of such intellectual cooperation is very great, and they lay down simple rules for making this cooperation effective.

J. D.

Physicians of the Mayo Clinic and the Mayo Foundation. London: Humphrey Milford; Oxford University Press; Minneapolis: The University of Minnesota Press, 1937. vi + 1575 pages. Price, $10.00.

This is the fourth volume to appear under the title of "Physicians of the Mayo Clinic and the Mayo Foundation." The first was published in 1923, the second in 1927, and the third in 1931. The present volume, which contains all the material in previous issues, is divided into four sections: (1) a main section containing biographies, in alphabetic order, and bibliographies, in chronologic order, of persons who served in the

Clinic or Foundation for one year or more; (2) a section containing brief biographies of persons who were officially connected with the Clinic or Foundation for less than a year; (3) an index of universities or colleges from which persons appearing in the main section received their degree; (4) a geographic index.

Of particular value to medical librarians are the biographies, accompanied by photographs, of every individual who has been connected with the Mayo Clinic for over a year. In addition, the bibliographies are unusually complete and range from a few titles to two hundred and twenty-six by Dr. W. C. Alvarez, four hundred by Dr. C. H. Mayo, and practically the same number by Dr. W. J. Mayo. The completeness of the report and the fact that no photographs are lacking speaks very highly for the efficiency of the Mayo Clinic organization.

Army Medical Library. Washington, D. C. Recent book acquisitions. Vol. 1, No. 1. April 1938.

This short title list of recent accessions to the Army Medical Library is arranged by subjects and comprises works dated mostly 1934-1937, although a few of earlier dates are included.

It is the intention of the Librarian to issue additional lists at irregular intervals if found useful by the medical librarians of the country. The edition is limited at present to 250 copies.

Attention is called to the rule of the Library that all works excepting those published before 1850 or those of a reference character may be borrowed on inter-library loan or through an institution.

Horrall, O. H. Bile, its toxicity and relation to disease. 434 p. 8°. Chicago, Univ. of Chicago Press, 1938. $4.00.

This work forms one of the University of Chicago Monographs in Medicine. It is a critical summary of modern knowledge on the composition of bile and its relation to disease.

It is an important source book for the reference librarian as it has 124 pages of bibliography, listing 2177 separate items. It is unfortunate for the librarian that this large collection of references is not broken down into chapter sub-divisions but is arranged alphabetically by authors, although this defect is obviated to a certain extent by direct reference from the various chapters.

The first two chapters on the history of bile and on the history of bile experimentation should prove useful for ready reference.

The book is well written, well printed, and is recommended for all medical libraries.

XUM

Journal of Documentary Reproduction. Vol. 1, No. 1. Winter 1938. American Library Assoc. 520 North Michigan Avenue, Chicago, Ill. Subscription $3 a year.

The *Journal of Documentary Reproduction* will keep librarians, archivists, scientists, and others abreast of ever-changing developments in the reproduction of documents. Its publication marks another forward step in the movement which the American Library Association has aggressively championed for the past several years.

Outlining the scope of the new *Journal* in its first issue, Winter 1938, a thick 128-page periodical, Charles E. Rush, associate librarian of Yale University Library and chairman of the editorial board, points out that "attention will be given to the several allied processes of reproduction and duplication adapted to the dissemination of information and not at present within the range of the printing press." The *Journal* will supplement and keep up to date *Microphotography for Libraries,* the first two volumes on the subject ever published, which were edited by M. Llewellyn Raney, director of the University of Chicago libraries, and published by the Association in 1936 and 1937.

The present number gives in detail the great projects now going on in various libraries in Great Britain and America. The journal is essential to those who wish to keep abreast of the new developments in the field of micro-photography.

Scientiae Naturalis Bibliographia. Edited by W. Junk. Annus 1: 1937. Pars 1. 87 Van Bleiswijkstraat, Hague, Holland. Subscription 2 florins a year.

This new bibliography will be issued twice a year and will list, as far as possible, all books on Natural History, Biology and allied subjects published in all parts of the world, during the six months prior to publication.

Dempster, James H. Medical writing: some notes on its technic. 168 p. 12 mo. Saint Paul, Bruce Publishing Co., 1937.

The author, editor of the *Journal of the Michigan State Medical Society,* writes from his experience as an editor of medical journals over a period of a dozen years.

The work has been written from the editorial point of view and contains chapters of interest to medical librarians. That on "Illustrations" is particularly valuable; while those on the "Editorial function,"

"Greek derivatives," the "History of medical journalism," and "Copyright regulations" are unusual in this type of book and are valuable for reference work.

One is reminded of the work of Dr. George M. Gould, of Philadelphia, a great editor, compiler and lexicographer, and a founder of the Medical Library Association. In 1900, he wrote his well-known "Suggestions to medical writers," a book of 182 pages, one of the first books of its kind to be published in the United States and based on his personal experience as an editor of medical journals.

RECENT CATALOGS OF MEDICAL INTEREST

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45 Old Bond Street
London, W. 1, England

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Medical books, 15th-19th centuries. Catalog 91. Lists 424 items, including a number of classical texts.

K. F. Koehler's Antiquarium
21 Taubchenweg
Leipzig, Germany

Naturwissenschaften. Catalog 117. 2931 periodicals, reference and source books. The sections on botany, chemistry, anthropology, pharmacy and zoology contain many titles of medical interest.

Hans P. Kraus
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Vienna, Austria

Old books on medicine, pharmacology, alchemy and natural sciences, mostly from a monastic library. Catalog 17. Lists 378 items, some of extraordinary interest, especially the three Champier's, the Rome Hernandez and other herbals, the first medical work of Rabelais, the three Thurneysser items, and the very important and scarce "Speculum vitae" humanae, of Rodericus Zamorensis, Augsburg, 1479.

Arthur Lauria
174 Boul. Hauffmann
Paris, France

Médicine et sciences anciennes (xv^{e}-xviii^{e} siècle). Catalog 40. Priced in Swiss Francs. Lists 404 items. 32 plates of illustrations and an index of authors and subjects. A beautiful catalogue.

Martinus Nijhoff, N. V.
9 Lange Voorhout
The Hague, Holland

Medicine. Books. Lists 215 and 223. Lists 227 items of valuable source material.

Old Hickory Book Shop
65 Fifth Avenue
New York City

Medicine. List 34. 56 medical items.

C. E. Rappaport
16 Piazza Trinità de'Monti
Rome, Italy

Opera medica vetera. Catalog 88. Lists 532 items priced in American dollars, containing many valuable books.

XUM

Schuman's
58 West Adams Street
Detroit, Michigan

Medical miscellany. Including an unusual group of pamphlets and books by and about Sir William Osler. Lists 585 items, including 117 Osleriana.

Scribner's Book Store
597 Fifth Avenue
New York, N. Y.

Science and thought in the 19th century. A collection of first editions. Catalogue 113. Lists 413 items. (Mary Louise Marshall note 186, a first edition of James Ewell, sold to J. F. B.)

Maggs Bros., Ltd.
34 Conduit Street
London, W. 1, England

Bibliotheca Incunabulorum. Catalogue 656, Spring 1938. Listing 419 books printed before 1501. Arranged by countries and presses. This well-illustrated, annotated catalogue with its copious indices of names, titles, printers and towns, is worthy of preservation as a valuable reference work.

Medical books are not many but there are a number of outstanding medical items, such as the "Liber marescalciae equorum," of L. Rusius [Speier before 1489], an early book on veterinary medicine; a Latin edition of Grunpeck's tract on syphilis "De pestilentia scorra." . . . Leipzig [after 18 Oct. 1496]; the Hebrew Avicenna of Naples, 1491, the first medical book to be printed in Hebrew; and the first edition of Nicolaus Praepositi, "Ysagoge sive introductiones in artem apotecariatus" [Lyon, ca. 1490].

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